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ABSTRACT

This annotated bibliography of research in agricultural education in the Philippines includes 77 studies completed between 1960 and 1968. They are arranged alphabetically by author and outlined according to purpose, method, and findings. A related document available in this issue as VT 012 793 includes 54 studies between 1930 and 1959. (GB)

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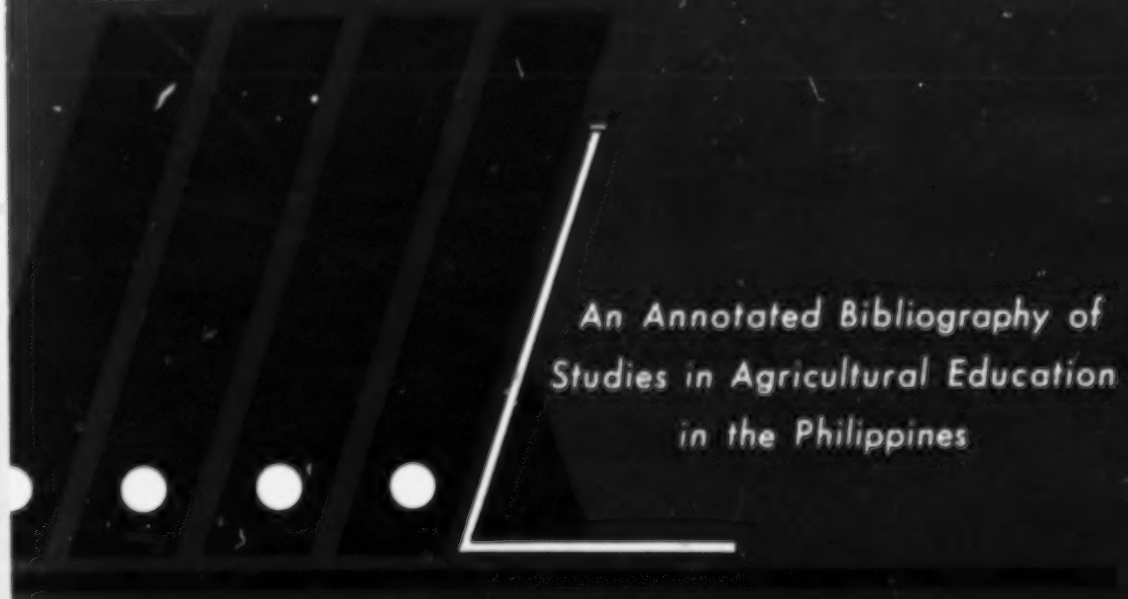
Summaries of Studies in Agricultural Education in the Philippines

1960-1968



An Annotated Bibliography of
Studies in Agricultural Education
in the Philippines

UNIVERSITY OF THE PHILIPPINES
COLLEGE OF AGRICULTURE
COLLEGE, LAGUNA

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Summaries of Studies

in

Agricultural Education

in

the Philippines

1960-1968

UNIVERSITY OF THE PHILIPPINES
COLLEGE OF AGRICULTURE
COLLEGE, LAGUNA
1968

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FOREWORD

On the publication of *Summaries of Studies in Agricultural Education in the Philippines* in 1959, the initial reaction on the part of agricultural educators and others was extremely favorable. This was not unexpected in view of the fact that the publication made abstracts of researches in agricultural education readily accessible to scholars for the first time. The College of Agriculture of the University of the Philippines and the Agricultural Education Division of the then Bureau of Public Schools are to be commended for their foresight and initiative in compiling the research abstracts.

At the Fifth Annual National Convention of the Association of Colleges of Agriculture of the Philippines, Inc. held in January, 1968 at Silliman University, the delegates approved a proposal submitted by the U.P. College of Agriculture delegation to carry out a cooperative project for compiling abstracts of agricultural education studies completed since 1960. The present volume of annotated bibliographies is the outcome of that cooperative ACAP project and is the first supplement to *Summaries of Studies in Agricultural Education*. Grateful appreciation is extended to Dean Dioscoro L. Umali of the U.P. College of Agriculture for making available the personnel and financial resources needed to complete the project successfully.

CICERO D. CALDERON, *President*
Association of Colleges of
Agriculture in the Philippines, Inc.

October, 1968

INTRODUCTION

Summaries of Studies in Agricultural Education in the Philippines, published in 1959, was the first attempt to compile in one volume annotations of the many studies bearing on problems of agricultural education in this country. Fifty-four abstracts of investigations conducted from 1930 to 1959 were included in that publication.

Since 1960, additional relevant investigations have been completed, and papers bearing on them have been either scattered in a number of different journals or have remained as manuscripts deposited in libraries here or abroad. It was felt that agricultural education in the Philippines would best be served by placing in the hands of educators and others interested in this field of study a condensed report of pertinent studies completed *since* 1960. Therefore, last year, the *Association of Colleges of Agriculture of the Philippines,* Inc. (ACAP) created a Special Committee to collect and publish abstracts of these studies, including those that had not been included in the 1959 volume. The Special Committee was made up of one representative of each ACAP member-institution, a representative of the Agricultural Education Division, Bureau of Vocational Education, and a chairman from the U.P. College of Agriculture. The duty of a committee member was to collect abstracts of studies in agricultural education performed at his institution. A total of 77 abstracts were submitted to the chairman who was responsible for their final editing and classification. No attempt was made to assign space to each abstract on the basis of its nature or possible merit. Persons interested in reading the original manuscripts from which these abstracts were prepared are encouraged to contact the institution listed under the annotation in question.

To guide the Committee in its selections of abstracts, it was agreed that the term *agricultural education* shall refer to the *professional* aspects of teaching agricultural subjects at all levels — elementary, secondary and collegiate. Examples of some of these aspects are teaching objectives of various agricultural courses, characteristics of students, qualifications of teachers, in-service training program, curriculum development, vocational placement of graduates, methods of teaching, administration and supervision, and the like.

Following is a list of the members of the Special Committee and the institutions they represent:

Member	*Institution*
Marcelo S. Corpuz	Aklan Agricultural College
Jose F. Crisanto	Araneta University
Flor B. Mandac	Cagayan Valley Agricultural College
Mario R. Melchor	Camarines Sur National Agricultural School
Jose C. Alonzo	Central Luzon State University
Francisco T. Lagahit	Central Mindanao University
Enrique S. Altis	Central Philippine University
Luz E. Gabertan	Iloilo National College of Agriculture
Eriberto Alonzo	Mindanao Institute of Technology
Zacarias Valdez	Mindanao State University
Francisco J. Canuto	Mountain Agricultural College
Gregorio Bayot	Mountain View College
Clemente Pilar	Palawan National Agricultural School
Christopher Ablan	Silliman University
Porfirio V. Barlaan	University of Eastern Philippines
Severino R. Santos, Jr.	U.P. College of Agriculture
Frederick K. T. Tom, (Chr.)	U.P. College of Agriculture
Apolonio C. Anunciado	Visayas Agricultural College
Ismael Getubig, Jr.	Xavier University
Jovencio Bacalso	Bureau of Vocational Education

FREDERICK K. T. TOM, *Editor*
Department of Agricultural Education
U.P. College of Agriculture
College, Laguna

November, 1968

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Summaries of Studies, 1960-1968

55. ABLES, H. A., G. T. CASTILLO, and G. F. SAGUIGUIT. Scholastic Performance of Freshmen in the University of the Philippines, College of Agriculture During the Academic Year 1960-61. Philippine Agriculturist. pp. 198-214, Vol. 46, No. 4, 1962.

Purposes.

(1) To study the academic performance of first-year students in the UPCA during the school year 1960-61.

(2) To investigate the relationships between grades in certain high school subjects and related first year subjects in college.

(3) To find out the relationship between results of the College Freshmen Examination and scholastic performance in the first semester of college work.

(4) To find out the comparative performance of freshmen grouped under various categories.

Method. Grades and personal data of new freshmen who enrolled in June 1960 were treated according to Pearson's Product-Moment Coefficient of Correlation formula and simple analysis of variance.

Findings and Interpretations. The following were found to be highly related at a statistically significant level:

Grade in English IV (High School) X Grade in English I (College);
Grade in Biology X Grade in General Botany;
Grade in Biology X Grade in Zoology;
Average grade in high-school Mathematics X grade in College Algebra;
Grade in College Algebra X Grade in English I;
Grade in English IV X English Placement Test Percentile score;
Scholastic performance X General Scholastic Aptitude percentile score;
Scholastic performance X English Placement Test percentile score;
Scholastic performance X Grade in English I; and
Scholastic performance X Size of graduating class.

Public high-school graduates attained better marks than private high-school graduates. There was no significant difference in the mean averages of students grouped under types of public high schools. Regional location of high school was not related to academic performance. Males achieved as well as females. Children of parents with different occupations did not vary significantly in their performance. Differences in mean averages of age groups were not statistically significant in the first semester but they were so in the second semester. Scholastic achievement of off-campus residents was slightly higher than that of on-campus residents.

56. AGPOON, VALERIO M. A Follow-up Study of the Graduates of the Bulacan National Agricultural School. Thesis, M.A., 1957, Arellano University Graduate School, Manila.

Purpose. To find out the present occupations of the 1954-1955 graduates of the Bulacan National Agricultural School.

Methods. The questionnaire, interview, and observation methods were used in this follow-up study. Five hundred sixty-one graduates of the secondary curriculum and 40 of that of the collegiate were included in this study.

Findings and Interpretations.

(1) Of the 561 secondary graduates, 260 (46.35 per cent) were engaged in occupations for which they were trained; 59 (10.51 per cent) were engaged in non-agricultural occupations; 47 (8.38 per cent) were continuing in non-agricultural colleges and universities; 47 (8.38 per cent) were continuing in agricultural colleges and universities; 10 (1.78 per cent) were unemployed; 138 (24.60 per cent) were unaccounted for.

(2) Of the 40 technical agriculture graduates, 25 (62.50 per cent) were engaged in occupations for which they were trained; two (5 per cent) were in non-agricultural occupations; seven (17.50 per cent) were continuing in agricultural colleges and universities; two (5 per cent) were continuing in non-agricultural colleges and universities; four (10 per cent) were unaccounted for, and none was unemployed.

(3) Recommendations:
   (a) Appoint Farm and Home Demonstrators or FFP and FAHP coordinators.
   (b) Include home crafts in the secondary curriculum.
   (c) Extend the two-year college course into a four-year college course leading to the degree of Bachelor of Science in Agriculture.
   (d) Appoint a full-time guidance counselor.
   (e) Install a larger water tank or an irrigation pump.
   (f) Procure more machinery and tools.
   (g) Procure more reference books for the library.
   (h) Include mechanized farming as part of the training of FFP.
   (i) Allow students and graduates to obtain roosters, piglets and seeds from the school.

57. AGRAVANTE, ERLINDA L. A Study of the Educational Qualifications of Both Vocational and Academic Teachers of the Agricultural and Rural High Schools of Samar Division III (now the Division of Eastern Samar). Special Problem, B.S.T.T., 1964, Samar Institute of Technology (now the University of Eastern Philippines). 12 p. Library. University of Eastern Philippines, University Town, Northern Samar.

Purpose. To determine the academic and professional training of agricultural and rural high school teachers in Eastern Samar.

Method. Sixteen faculty members of four rural and agricultural high schools of Eastern Samar were included in the study. The survey-personal interview method was employed.

Findings and Interpretations. All teachers included in the study were holders of bachelor's degrees. Seven earned BSA or B.S. Ag. Ed. degrees; four, B.S.E.; four, B.S.H.E. and B.S.H.T.; and one, B.S.I.ED. All the teachers were assigned to teach their specialized subjects.

Nine teachers had advanced units leading to another degree; five had taken units for professional improvement and guidance and counseling assignment; six had special technical training other than what they pursued; five found their special technical training very helpful in their assigned work; only one found his special technical training slightly helpful.

All the 16 teachers had been in their present station from one-half month to three years and seven

months, or an average of one year and five months. Two teachers were on permanent status, 12 on probational status and two on emergency status.

58. ALEMAN, CECILIA F. A Survey of the Off-Campus Teaching Problems of Student-Teachers of the CSNAS for the School Year 1963-1964. Senior Study, 1964, 23 p. Camarines Sur National Agricultural School, Pili, Camarines Sur.

Purpose. To find out the problems encountered by student teachers in their off-campus teaching and to determine how the cooperating schools influence their training.

Method. Questionnaires were sent to 38 student teachers. Eleven were elementary agriculture and industrial arts majors and the remainder were vocational agriculture majors.

Findings and Interpretations. Student teachers who were assigned to elementary schools encountered more difficulty than those assigned to agricultural secondary schools. The first ten outstanding problems met by the student teachers were: (1) lack of supervision of cooperating teachers; (2) lack of units in music; (3) lack of classroom devices; (4) handicap in Pilipino; (5) dissatisfaction with critics' supervision; (6) difficulty in disciplining students; (7) lack of references; (8) critics' lack of interest in student teachers; (9) critics' high expectations from student teachers and (10) very poor students.

The following recommendations were made: (1) that there be a workshop of all cooperating teachers to be conducted by the mother school before the implementation of the off-campus training program; (2) that the off-campus work of the student teachers be organized so that they will actually observe and take part in the work of the various grades or years with the end in view of applying the theory of effective teaching; (3) that the purpose and nature of the work in the laboratory schools be such that the student teachers are able to evaluate practices against principles of teaching and not to encourage them to imitate or copy what they have observed; (4) that only competent cooperating teachers be chosen to supervise student teachers; (5) that the teaching load of a cooperating teacher be reduced to give him sufficient time to attend to his trainee; (6) that the teaching program for off-campus training be held earlier so that the student teachers will have more time to teach without so much disruption of classes as in the latter part of the school year; and (7) that student teachers majoring in Elementary Agriculture and Industrial Arts not be assigned to teach music, Pilipino, and other subjects not related to agriculture and industrial arts.

59. ALONZO, ERIBERTO C. The Use of Programmed Text Materials in Teaching Rice Culture in Some Secondary Agricultural Schools in the Philippines. Thesis, Ph.D., 1966, University of the Philippines. 333 p. Library. U.P. College of Agriculture, College, Laguna.

Purpose. (1) To develop a linear type of programmed instruction text material in rice culture; (2) to determine the amount of learning acquired by students exposed to the conventional lecture-discussion method and the programmed instruction method of teaching rice culture; (3) to compare the effectiveness of teaching in terms of learning acquired in the teaching of rice culture.

Method. Eight vocational agricultural teachers and 400 male third-year students in eight secondary agricultural schools cooperated in this study. Two methods of teaching rice culture (the conventional lecture-discussion and the programmed instruction methods) were compared using an experimental design. Data were collected through in-

terviews and through three tests: an intelligence test, a diagnostic reading comprehension test, and an achievement test on rice culture.

Findings and Interpretations. The student t-test showed that the programmed instruction method was superior in six out of eight schools. The analysis of variance showed that there were significant differences at the five per cent level between the conventional and the programmed instruction methods. Students in the former methods achieved a gain of 59.06 points during the experiment; those in the latter gained 85.98 points.

The results of the study support earlier findings that programmed instruction is indeed an effective method of teaching. Thus, the author recommends that similar investigations be conducted to study factors other than teaching effectiveness, that curriculum planners seriously consider the great possibilities of this method, and that additional studies involving different grade levels and agricultural subjects be conducted.

60. ALONZO, FORTUNATO C. An Appraisal of the Off-Campus Student Teaching Phase of the Teacher Education Curriculum in Agriculture of the CLSU. Thesis, M.S., 1967, Central Luzon State University. 96 p. Library, Central Luzon State Universiyt, Muñoz, Nueva Ecija.

Purpose. To determine the attitudes, problems and needs of administrators, cooperating teachers, and students of cooperating schools and student teachers relative to the teacher education program of the Central Luzon State University.

Method. Survey questionnaires were administered to 19 administrators, 65 cooperating teachers, 660 students, and 66 student teachers.

Findings and Interpretations. The following weaknesses were revealed: (1) the student teaching period was too short to develop the necessary professional skills in teaching; (2) there was poor coordination between the cooperating schools and the University; (3) student teachers were deficient in the use of audio-visual aids; (4) references such as books, pamphlets, periodicals, etc. were inadequate; (5) student teachers were deficient in classroom control and management.

The following recommendations were offered in the light of these observed weaknesses:

(1) The duration of the student teaching program in CLSU should be lengthened from eight weeks to one semester.

(2) Closer coordination between the cooperating schools and the training institution should be effected through seminars, workshops, etc., held at least once a year.

(3) Aside from providing adequate facilities and references, the cooperating schools should furnish the student teachers advance copies of the courses of study. the schedule of classes, a tentative work program, teaching assignments, and their other responsibilities.

(4) Training institutions should furnish the cooperating schools cumulative records of their student teachers. Student teachers with back subjects should be barred from student teaching.

(5) CLSU should arrange opportunities for student teachers to participate in extra-curricular activities and to visit other cooperating schools. In addition, it should periodically shift the responsibilities of student teachers for their continued improvement.

(6) Student teachers should be required to read cultural, educational, and scientific materials and participate in professional activities.

61. ALONZO, JOSE C. An Evaluation Study of Student Teaching Experiences of CLAC Elementary Agriculture Student Teachers of Class 1959. Thesis, M.S., 1959, Central Luzon Agricultural College. 56 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purpose. To identify the strong and weak points in the student teaching program of the Central Luzon Agricultural College.

Method. The questionnaire and interview methods were used with student teachers, pupils, teachers and administrators of cooperating schools.

Finding and Interpretations. The results of this study indicate conclusively that the campus student teaching period should be prolonged. It also shows the need for additional courses during the pre-service period in order to have better prepared elementary agriculture student teachers.

Based on the findings of this study, the following recommendations towards vitalizing the student teaching program in the CLAC were offered:

(1) The student-teaching period should be devoted solely to student teaching. The student teacher should not take other courses while student teaching.

(2) The student teaching period should last for one full semester.

(3) Courses in audio-visual methods should be included in the undergraduate teacher-education curriculum. Proper preparation and use of audio-visual instructional materials should also be emphasized.

(4) Teaching methods for such academic subjects as language, arts, music, arithmetic, health and science should be included in the teacher-education curriculum for elementary agriculture teachers.

(5) Courses such as tests and measurement, child growth and development, principles of guidance, and child psychology should be included in the curriculum.

(6) Student teachers should live in the communities where the cooperating schools are located during the student teaching period.

(7) Cooperating teachers, school administrators, teacher-trainers and others involved in the student teaching program should be brought together for a conference at least once a year in order to develop better understanding and closer working relationships.

(8) Training in handicrafts should be included in the curriculum for the training of elementary agriculture teachers.

(9) Increased competency in communication skills by prospective teachers should be developed.

(10) The student teaching program should be evaluated after each period of student teaching.

(11) The importance of developing many competencies needed by elementary agriculture teachers points to the inadequacy of a two-year period of preparation. Therefore, a four-year pre-service curriculum for elementary agriculture teachers should be established.

62. ARIZ, TEOFILO S. Job Placement of Bachelor of Science in Agricultural Education Curriculum Graduates of the Central Luzon Agricultural College from 1955 — 1960. Thesis, M.S., 1961, Central Luzon Agricultural College. 74 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purposes. The purposes of this study were to: (1) identify the nature of employment of all BSAE graduates of CLAC from 1955-1960; (2) obtain information about their salary and their difficulties in securing employment; (3)

determine the number of graduates engaged in farm productive enterprises; (4) determine the most needed occupations in our rural communities.

Me:hod. Personal interviews were conducted with parents of graduates, educators, government officials and secondary agricultural school principals. Survey questionnaires were directly sent to BSAE graduates of CLAC from 1955 to 1960.

Findings and Interpretations. Of the 275 graduates studied, 181 (65.73 per cent) were in teaching and were distributed as follows: 35 (12.73 per cent) as vocational agriculture teachers in national agricultural schools; 11 (four per cent) in rural high schools; nine (3.27 per cent) in the collegiate and secondary departments of the Central Luzon Agricultural College; 42 (15.28 per cent) as elementary classroom teachers; 28 (10.18 per cent), elementary garden teachers, and eight (2.91 per cent) in private high schools. Thirty-seven (13.45 per cent) were employed in government entities; 17 (6.17 per cent) in private enterprises; 54 (12.36 per cent) unemployed at the time of the survey; four (1.46 per cent) in the U.S. Navy; and two (0.73 per cent) were studying at the National University in Manila.

Out of the 25 female graduates studied, only one was a vocational agriculture teacher.

The average monthly salary of teachers was ₱189.84; those employed in government enti ies, ₱180.41; those employed in private enterprises, ₱184.52; and those in the U.S. Navy, ₱420.00.

The three most important difficulties of the graduates in securing jobs were the lack of: (1) civil service eligibility; (2) political backers, and (3) major and/or minor subjects.

One hundred and twelve graduates (40 per cent) were engaged in productive farming work. Of these, 55 (49 per cent) were engaged in rice production on a part-time or full-time basis; 25 (22 per cent) helped their families in raising crops and animals; 16 (14 per cent) raised vegetables; nine (eight per cent) raised poultry; four (four per cent) raised swine; two (two per cent) raised crops and animals with tenants and laborers; and one (one per cent) raised crops together with inland fish.

The graduates thought that the occupations needed most in the Philippines were those in practical and scientific farming, medicine, engineering, veterinary, technology, nursing, and fishery.

Recommendations made were: (1) raise the quality of instruction by limiting the number of students; (2) discourage the enrollment of female students in the Bachelor of Science in Agricultural Education curriculum; (3) encourage the Bureau of Civil Service (now the Civil Service Commission) to give the Senior Teacher of Agriculture examination once every two years, possibly during the first week of June; (4) enjoin administrators of agricultural schools and government entities to employ BSAE graduates of CLAC on the basis of scholastic records rather than of political influence; (5) add economic entomology and plant pathology to the BSAE curriculum; (6) include *practicum* as a part of the BSAE curriculum (7) employ a placement director at the Central Luzon Agricultural College.

63. AVILA, DIMNA V. A Study of the Performance of the U.P. Rural High School Graduates Who Continued Their Studies in the U.P. College of Agriculture. Thesis, M.S., 1964, University of the Philippines, 86 p. Library, U. P. College of Agriculture.

Purposes. (1) To determine the characteristics such as age, sex, and scholastic performance of the 1950-1959 U. P. Rural High School graduates who continued their studies at the U. P. College of Agriculture;

(2) to follow through the performance of the U. P. Rural High School graduates who enrolled at the U. P. College of Agriculture from their freshmen year until graduation; and (3) to find out possible relationships between their performance in the high school and in college.

Methods. High school and college records of 221 students enrolled at UPCA who graduated from the U. P. Rural High School from 1950 to 1959 were investigated for this study.

Findings and Interpretations.

(1) Of the 387 U. P. Rural High School graduates in 1950-1959, 221 (57.1 per cent) enrolled in the U. P. College of Agriculture; enrollment in college was independent of their scholastic performance in the high school. At high school graduation, the mean ages of the 141 boys and 80 girls who enrolled were 16.51 and 15.71 years respectively.

(2) Seventy-five and one-tenth per cent enrollees finished college; however, slightly more than one-half graduated with college average grades of 2.6-3.0. The average residence in college was 8.5 semesters and 2.3 summer sessions. Sixteen per cent appeared on the honor roll and 31.9 per cent in the scholastic delinquency list. Slightly more than one-fifth (22.2 per cent) dropped out of college due to scholastic delinquency. Most of the students (45.2 per cent) did not have any particular field of specialization. Of those who did, the five more popular fields were: economics, agronomy, agricultural engineering, entomology and agricultural education. Most of the students excelled in Animal Husbandry 1 and 2, Agronomy 1 and 2 while Physics 1, Mathematics 1 and Soils 1 were the subjects many students failed.

(3) A coefficient of correlation value (r) of 0.76 between high school and college scholastic performance was found. Persistence, scholastic performance, residence, dropping-out, placement in the honor roll and inclusion in the delinquency list were related to high school academic performance.

64. BALDAZO, MILAGROS BELARMINO. Predicting Off-Campus Teaching Performance of U.P. College of Agriculture Student Teachers. Thesis, M.S., 1968, University of the Philippines College of Agriculture. 81. p. Library, U.P. College of Agriculture, College, Laguna.

Purpose. Five questions were to be answered:

(1) Does a relationshjp exist between the teaching performance rating of the student teacher in off-campus teaching and either the grade average in his preparation courses, communications courses, other courses, or all courses taken prior to student teaching?
(2) Does a relationship exist between the grade averages in preparation courses, communications courses, and other courses taken two at a time?
(3) Does a relationship exist between the teaching performance ratings taken two at a time?
(4) Does a relationship exist among the three grade averages in preparation courses, communications courses, and other courses?
(5) Does a relationship exist among the three teaching performance ratings?

Methods. The academic records of the subjects (ten U.P.C.A. student teachers who graduated within the school years 1965 to 1967) were studied. Two sets of questionnaires were used in evaluating the student teachers

in their off-campus student teaching performance: one by the cooperating teachers and another by the pupils.

Findings and Interpretations. Results of this study showed that the grade average in *other courses* could be used as a predictor of off-campus teaching performance ratings by the teacher trainer, while the grade averages in *all courses and communications courses* could be used as predictors of off-campus teaching performance ratings by the pupils. However, this study did not show any predictor of off-campus student teaching performance ratings by the cooperating teacher.

This study also revealed no relationship between any two grade averages in the preparation courses, communications courses, and other courses; and no association among these three grade averages. Likewise, no relationship existed between any two ratings of off-campus teaching performance and no association existed among the three ratings.

65. BANZUELA, FELICIDAD B. A Study to Determine the Need for Conducting an Annual Seminar of the Different Cooperating Schools at the Camarines Sur National Agricultural School. Senior Study, 1964. Camarines Sur National Agricultural School, Pili, Camarines Sur.

Purposes. The purposes of the study were to find out the feasibility of conducting an annual seminar for cooperating teachers and to find out the problems met by both student teachers and cooperating teachers relative to off-campus teaching.

Method. Questionnaires were sent to 25 cooperating teachers from four cooperating schools. Twenty alumni of the school who earned Bachelor of Science in Agricultural Education degrees were requested to accomplish a different questionnaire.

Findings and Interpretations. Both the cooperating teachers and alumni were in favor of holding a seminar to upgrade the student teaching program of the Agriculture Teacher Department of Camarines Sur National Agricultural School.

So that the concept behind the proposed seminar be permanent and real rather than imaginary, the following recommendations were submitted: (1) an annual seminar of cooperating teachers should be held in summer in the mother school where problems met during the off-campus period could be discussed and given the best possible solutions; and (2) at least one semester should be allotted to off-campus teaching to start right after the end of the first semester while the cooperating teachers are not too busy with their reports and can still devote their time fully to the supervision of their student teachers.

66. BATTAD, FORTUNATO A. A Comparative Study of the College Students' Scholastic Performance at the Mindanao Institute of Technology. Thesis, M.S., 1962. University of the Philippines. 97 p. Library, U.P. College of Agriculture, College, Laguna.

Purposes. (1) To determine the general scholastic performance and the performance in different subject matter areas of college students from different types of high schools; (2) to find out the relationship between rate of drop-out, persistence, scholastic delinquency, and placement on the honor roll and type of high school attended; (3) to determine the relationship between grades obtained in related subjects and (4) to determine other factors associated with various levels of scholastic performance in the periods up to graduation.

Method. Academic records of 192 students who enrolled for the degree of Bachelor of Science in Agriculture (General Curriculum) at the Mindanao Institute of Technology, Kabacan, Cotabato in June, 1957 were used for the study.

Findings and Interpretations.

(1) Students from three types of high schools did not differ significantly in their general scholastic performance. When the three groups were compared with regard to their mean grade in 15 different subject matter areas, statistically significant differences occurred only in Spanish. Based on the findings, agricultural high school graduates seem to be equally prepared for agricultural college work as those from public non-vocational and the private non-vocational high schools.

(2) Type of high school attended and age were not significantly related to the rate of drop-out, persistence, and scholastic delinquency. However, parents' occupation and residential background were found to be related to drop-out and persistence in school, with children of professionals and government employees and city residents having the highest rate of persistence.

(3) In general, relatively high positive correlations among grades were obtained in related subjects except in physics and engineering. Grades in English were highly correlated with general performance and with grades in physics and engineering.

(4) Parents' occupation and residential background were significantly related to scholastic performance, with city students and children of professionals and government employees exhibiting better performance.

The researcher concluded that graduates of agricultural schools taken as a group do as well as graduates of private and public non-vocational schools insofar as college work in agriculture is concerned.

67. BELLO, FARBECIANO N. A Survey of Vocational Guidance and Exploratory Experiences Among College Freshmen of the Samar Institute of Technology. Special Problem, B.S.T.T., 1964, Samar Institute of Technology. 20 p. Library, University of Eastern Philippines, University Town, Northern Samar.

Purpose. To determine the nature of the guidance and counseling experiences received by Samar Institute of Technology students prior to college enrollment.

Method. Questionnaires were administered to 430 freshmen enrolled in 1963-1964.

Findings and Interpretations. The majority of the students covered in the study were enrolled for a degree in elementary education. Of the students who responded to the separate items in the questionnaire, 45 per cent had been given vocational guidance instruction, 38 per cent received vocational guidance in agriculture, 38 per cent had received guidance instruction from their parents, 47 per cent had taken vocational guidance tests, and 46 per cent had decided upon their courses by themselves.

In general, the majority of the students believed in the necessity of educational and vocational guidance before college enrollment. Specifically, 19 per cent believed that counselling should be given in all grades in the elementary school, 22 per cent in the fourth year of high school, and 18 per cent in the first year of college.

68. BONGAYAL, EVANGELISTA B. The Problems of Elementary Gardening in Tabaco District. Senior Study, 1964. 20 p. Camarines Sur National Agricultural School, Pili, Camarines Sur.

Purpose. To determine the problems of gardening encountered by the elementary schools in Tabaco District.

Method. Seven elementary schools were included in the investigation, of

which only five submitted data through a questionnaire prepared by the writer.

Findings and Interpretations. Teachers (of whom only one was a BSA graduate) and pupils frequently faced the lack of planting materials, agricultural chemicals, commercial fertilizers, and gardening references. Although the soil was suitable for gardening purposes, the lack of feasible means of irrigation also posed a problem. Work animals and proper gardening tools were, however, available. Crops raised in the five respondent schools were wholly for commercial production and not for experimental purposes. Gardening areas were sufficient only in four out of five schools. No school had systematic sharing and accounting practices.

The following recommendations were made: (1) the elementary agriculture teachers should enrich their knowledge of elementary gardening; (2) course outlines in elementary agriculture should be prepared by the Bureau of Public Schools; (3) seeds should be provided by the schools; (4) the teachers should make field trips to observe the methods and practices of other schools within the district; (5) adequate gardening references should be provided; (6) crops for experimentation should be raised, and (7) the elementary agriculture teachers should know how to analyze present and past cropping patterns.

69. CALLEJO, J. B. Improvement of the System of Conducting Supervised Farming Programs in the Secondary Department of the Mindanao Agricultural College. Thesis, M.S., 1961, University of the Philippines. Library, U.P. College of Agriculture, College, Laguna.

Purposes. (1) To determine the practices used by vocational agriculture teachers in the secondary department of the Mindanao Agricultural College in selecting, developing and supervising farming programs; (2) to determine the characteristics of supervised farming programs; and (3) to discover effective and economical practices and techniques for the selection, development and supervision of farming programs.

Method. The questionnaire, observation and interview methods were used in the study.

Findings and Interpretations. The study revealed the following: most of the supervised farming programs were unbalanced and inadequately planned; no definite policy was followed in the selection of group leaders and students were left alone in conducting their farming activities; very few groups kept complete and accurate records; most of the groups cultivated such big areas they could not operate them successfully; although most of the approved farming practices in crop and livestock production were used by the students, results were not satisfactory; likewise, recommended practices did not yield satisfactory results.

70. CELESTINO, ANDRES F. 1967. Some Aspects of Higher Education in Agriculture in Britain and Some Suggested Modifications Appropriate in the Philippines. The Researcher 3 (3): 53-57. (Part of a postgraduate Diploma in Educational Administration dissertation, 1967, University of Reading, England.)

Purpose. To study some important aspects of the British system of higher education in agriculture, and to learn from the British experience some modifications appropriate for Philippine universities, especially for the smaller ones.

Method. The study was based mainly on information published in university, faculty and departmental prospectuses, on official reports of the Ministry of Education and of the Uni-

versity Grants Committee, and on the writer's personal contacts and interviews with highly responsible administrative and academic officials and staff of the University of Reading.

Findings and Interpretations. British formal higher education in agriculture is provided at three levels: universities, agricultural colleges, and farm institutes. Farm institutes provide more practical and specialized instruction than do colleges, and offer one-year courses leading to the various certificates in agricultural subjects awarded by the City and Guilds of London Institute. Agricultural colleges provide two-year courses leading to the diploma qualifications of the City and Guilds of London Institute. Diploma courses give adequate instruction both in theory and practice of the latest husbandry techniques, business methods and marketing procedures. Universities, particularly the Agriculture Faculty, provide three-year undergraduate and one to three-year postgraduate training for agricultural scientists and technologists.

On the basis of the British experience, some modifications appropriate for small Philippine universities were suggested. Staff recruitment and promotion should be done by two special staffing committees at the college and the university levels. This is to diffuse responsibility for administrative decisions regarding appointments and promotions, making it a collective responsibility of the senior staff members, to insure a good appointment and a fair promotion, and at the same time minimize irrelevant personal or even political interferences.

Universities should allow only those who have already demonstrated their academic ability or those who obtain an average grade of 80% or more in their secondary school work to take the entrance examination. A special guidance and employment office should be set up to provide information and advice concerning occupational opportunities in agriculture to all prospective university students, whether primarily interested in agriculture or not, in order to attract qualified students.

In addition to a definite content of fundamental knowledge in the curriculum, subject-matter areas in which further advances in knowledge and understanding are possible should be offered. The aim in choosing subjects for the curriculum should be to link the different fields of knowledge and understanding. A special board of studies should be set up to review and revise on a continuing basis the teaching and timing of the subjects. Seminars, practical work and student projects should be used increasingly in addition to the traditional lecture-teaching method.

Universities should look for extra funds from foundations, private sources, etc. They should also approach municipal and provincial governments for assistance in consideration of university services in their area, e.g. extension and other special services. Income-generating projects, such as crop and animal production, should be improved. More funds should be placed directly and solely under the control of universities in order to increase considerably their ability to provide for their important role in the socio-economic development of the country.

71. CELESTINO, A. F., A. EULIN, J. MABILANGAN and L. GALIT. 1965. Studies on the Scholastic Performance of Students at the University of Eastern Philippines. The Researcher 1 (2): 82-91.

Purposes. To determine: (1) the most difficult college subjects and (2) the correlation between selected factors and a student's general scholastic performance and his performance in the various fields of science.

Method. All subjects offered under four degree courses (Bachelor of Science in Agricultural Technology, Bachelor of Science in Teachers' Technology, Bachelor of Science in Elem-

entary Education, and Bachelor of Science in Home Technology) were carefully examined from the second semester of 1957 to the second semester of 1961 (or a period of four years). The percentage of failure was computed.

The students' grades in their high school and college subjects were also obtained. The sample included 107 students. Then, a correlation analysis was made between a number of factors, using the Product-Moment Correlation Coefficient method.

Findings and Interpretations. Physical science subjects, notably mathematics, physics and chemistry, and biological sciences, particularly zoology, botany and animal husbandry, were the most difficult ones. The students' difficulty, most especially in the biological sciences, appeared aggravated by their inadequacy in English.

In this study, the high school scholastic performance was inconsistently correlated with CSP, which could mean that the high school academic achievement cannot be fully relied upon to predict or foretell one's academic performance.

Grades in high school and college English were correlated with CSP at the one per cent level of significance. English proficiency appeared strongly suggestive of the intellectual capacity of the students. Facility in the language was also very closely related to the performance of the students in social and biological science subjects — but not so much to their performance in the physical sciences.

The achievement test score appeared effective in predicting the CSP of students enrolled in technical but not in non-technical courses. The performance of BSTT and BSHT students in this test was significantly correlated not only with their over-all college academic performance but also with their separate academic achievements in social, biological and physical sciences. The BSEED students' achievement test scores were correlated with their performance in physical sciences.

72. CELESTINO, A. F., C. LOMUNTAD, V. ERGO, C. AVILA and F. TILBE. 1966. Living Conditions, Study Habits and Problems of College Students at the University of Eastern Philippines. The Researcher 2 (2): 45-56.

Purpose. To gather general information on the conditions and problems of students at the University of Eastern Philippines.

Method. Interviews were conducted with 599 college students taking different degree courses at the University of Eastern Philippines during the school year 1962-1963.

Findings and Interpretations. Three-fourths of the students included in the study had both parents still living. The majority of the students' parents were farmers. About 96 per cent of the students spoke the vernacular (*Waray*).

Almost all the students lived in cottages located on the school campus. Their cottages had one to three bedrooms with a maximum of three occupants to a room and an average floor space of 19 square feet for each occupant.

Only two-thirds used electric light; the rest used kerosene lamps. The majority washed their own clothes and prepared their own food either alone or with other students.

About 93 per cent of the students were fully parent-supported. Only 1.2 per cent were completely self-supporting. The majority of the students had ₱10.00 to ₱20.00 monthly for daily expenses.

Seventy-six per cent of the students saw the need for references for their subjects but only 69 per cent actually and voluntarily read. Thirten out of every 100 students did not use the library facilities at all.

Majority of the students had recreational activity schedules but few had study schedules. Twenty-seven out of 100 students spent less time in studying their difficult subjects.

Forty-two per cent were occasionally prepared and 12 per cent unprepared at all before going to class. Only 22 per cent claimed preparedness at all times. A little less than half of the interviewees read their notes five times or more before long examinations; 27 per cent, three or four times; and 30.8 per cent, once or twice.

Subjects considered difficult by almost all students were mathematics, physics, chemistry, zoology, botany, Education 5, and English. About 31.3 per cent alleged that the subject-matter content was too technical, 31.6 per cent claimed to have insufficient background in the subjects, and 24.5 per cent stated that they did not have enough interest in the subjects. Over one-half had difficulty in comprehending the medium of instruction, English.

Love, family, and financial problems affected most of the students. Only 20 per cent were not worried at all; the rest were occasionally or very often mentally disturbed by their problems. Very few consulted college guidance counselors for advice.

73. CHOTIKACHUMROON, NITEE. A Survey of the Problems of Teaching Elementary Agriculture in the NEC-AID Pilot Elementary Schools in the Philippines. Thesis, M.S., 1967, Central Luzon State University. 76 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purpose. To determine the common major and minor problems in teaching elementary agriculture in 106 NEC-AID pilot elementary schools throughout the Philippines.

Method. Survey questionnaires were distributed to the elementary agriculture teachers and principals of the 106 NEC-AID pilot elementary schools throughout the Philippines.

Findings and Interpretations. The most common major problem in the pilot schools was the shortage of reference materials. The lack of a full-time garden teacher ranked second followed by the assignment of elementary agriculture teacher to other unrelated subjects. Other major problems were: use of worn-out tools and equipment, difficulty in determining scope and sequence of subject matter, difficulty in selecting the most effective method suited to subject matter, shortage of textbooks, unsuitability of textbooks to local conditions, large classes which makes supervision difficult, and too heavy teaching load.

Minor problems include the teacher's not staying in the community, faulty accounting of garden funds, inadequate size of garden site, tardiness, inaccuracy of reports, lack of lesson plans, lack of emphasis on the importance of elementary agriculture, unsuitability of tools and equipment, lack of professional leadership, and absence of needed features in the school garden.

The root cause of these problems may be due to two factors: improper attitude on the part of the principals and other administrators toward elementary agriculture and the lack of technically qualified elementary agriculture teachers.

The following recommendations were made: to inculcate importance of elementary agriculture in the minds of the school administrators and to train elementary agriculture teachers in agricultural techniques as well as in the methods of teaching elementary agriculture.

74. CLAVERIA, SALVE P. A Study of the Economic Status of Elementary School Teachers in San Fernando, Camarines Sur. Senior Study, 1964. 24 p. Camarines Sur National Agriculture School, Pili, Camarines Sur.

Purpose. The study aimed at finding out the economic standing of elementary teachers.

Method. Questionnaires were sent to elementary school teachers in the municipality of San Fernando.

Findings and Interpretations. Teachers who were entirely dependent on their salaries were financially unstable.

The following recommendations were submitted: (1) supervisors and principals should urge teachers to intensify their food production campaign in poultry and swine raising, orchard production, and home gardening, and (2) teachers should minimize lavish entertainment during fiestas and other forms of entertainment and social niceties.

75. CONTADO, TITO EGARDO. Some Factors Associated with the Occupational Choice of the Philippine Vocational Agriculture Seniors. Thesis, M.S., 1964, University of the Philippines College of Agriculture. 95 p. Library, U.P. College of Agriculture, College, Laguna.

Purposes. (1) To find out the characteristics of the vocational agriculture senior students; (2) to determine the nature or emphasis of the curriculum with reference to preparing them for farming, for college studies, and for wage employment; and (3) to determine their occupational choices and the factors related to each choice.

Method. Five hundred seventeen vocational agriculture high school seniors of selected agricultural schools in the country were interviewed.

Findings and Interpretations. Majority of the seniors (average age, 19.8 years) were from the barrios, belonging to families with an average of 5.4 children. Slightly more than four-fifths of their fathers were farmers and a great majority of their mothers were full-time housekeepers. One-third of the vo-ag seniors decided on their own to enroll in the agricultural school while almost one-half decided their enrollment jointly with their parents. The rest of them enrolled in the agricultural school because their parents and others told them to do so. Almost one-half of the seniors perceived that their parents wanted them to study in college while only about one-seventh perceived that their parents wanted them to engage in farming after graduating. The seniors had significantly higher grades in practicum than in other agriculture or related subjects. Their lowest grades were in related subjects. More than four-fifths of the seniors did not have any land at the time of the study. The average capital prescription for farming was about ₱1,500.00. One-half of the vo-ag seniors chose to go on to college, while only slightly over one-fourth chose to engage in farming. The rest chose to seek wage employment.

Of the eight phases of the vo-ag program studied, five were perceived to be geared more toward farming than college studies or wage employment. No phase was perceived to have prepared the vo-ag seniors more for college studies and wage employment than for farming.

Four variables were found to be associated significantly with the seniors' choice of college studies:

(1) General average grades in agriculture
(2) Average grades in related subjects
(3) Positions held in high school organization
(4) Approximate value of standing crops and animals

The following variables were found to be significantly related to occupational choice:

(1) Chronological age at graduation
(2) Type of high school preferred
(3) Main reason for enrolling in the agricultural school
(4) Attitude towards farming
(5) Attitude towards college studies
(6) Parents' occupational aspirations for their sons
(7) Father's educational attainment
(8) Father's occupation
(9) Mother's educational attainment

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76. CUSHMAN, HAROLD R., and MARTIN V. JARMIN. The Effective Presentation of Data Obtained in Studies of Efficient Crop and Livestock Production, Processing, Marketing and Utilization for Use by Students in the Agricultural High Schools of the Philippines. Research Report, 1959, Cornell University. 271 p. Agricultural Education Division, Cornell University, Ithaca, N. Y.

Purpose. The purpose of this study was to test the following two hypotheses:

(1) Student enterprise manuals with the following characteristics are effective for use in improving learning by students in the agricultural high schools of the Philippines:
   (a) Based on data obtained in studies of efficient crop and livestock production, processing, marketing, and utilization.
   (b) Written by experienced Filipino agriculture teachers.
   (c) Written at a grade 7 (U.S.) reading level and at a high interest level as determined by the Flesch Formula.
   (d) Divided into the major farm jobs involved in the production, processing, marketing, and utilization of the enterprise from the farmers' viewpoint.
   (e) Illustrated with charts, diagrams, graphs, pictures, and maps chosen on the basis of appropriateness for illustrating the most important points that cannot be clarified by words alone.
   (f) Approximately 200 single-spaced (8½ x 11-inch) typewritten pages in length.
   (g) Approved by appropriate subject-matter specialists, agricultural teacher-trainers, and college English instructors.

(2) Student enterprise manuals with the above characteristics are equally effective for use with pupils in Agriculture 1, 2, and 3 of the agricultural high schools of the Philippines.

Method. Poultry and swine manuals possessing the characteristics set forth in the first hypothesis were developed. Three poultry achievement tests and three swine achievement tests were developed and given extensive try-outs to establish reliability and difficulty levels. An experimental field test of the poultry and swine manuals was conducted with 400 vocational agriculture students in the agricultural high schools using control and experimental groups equated on the basis of intelligence, reading ability, poultry achievement, and swine achievement. Both the control group and the experimental group were taught by the same teachers using the same methods and materials except that the enterprise manuals were utilized only by the experimental group. Data resulting from the experiment were analyzed for findings which would support or refute the two hypotheses of the study.

Findings. The pupils in the experimental group made a significant improvement in their post-test scores on poultry achievement and swine achievement as compared to their pre-test scores on the same tests. The pupils in the experimental group also made poultry and swine achievement than significantly higher post-test scores on poultry and swine achievement than did the control group on the same tests. On the basis of this evidence, it was concluded that the poultry and swine enterprise manuals had proven to be effective tools for improving learning by students in the agricultural high schools of the Philippines and that the first hypothesis was valid.

A comparison of the improvement in scores between pre-test and post-test made by the Ag 1, 2, and 3 experimental groups on the poultry and

swine achievement tests showed that the differences between the classes were not significant. It was therefore, concluded that the poultry and swine student enterprise manuals had proven equally effective for use with pupils in Ag 1, 2, and 3 of the agricultural schools in the Philippines and that the second hypothesis was also valid.

77. DEROGONGAN, MACAUROG B. Problems in the Local Administration of Agricultural Schools in the Philippines. Thesis, M.S., 1967, Cornell University. 101 p. Library, Cornell University, Ithaca, New York.

Purposes. (1) To discover the problems commonly faced by agricultural school administrators, and (2) to determine the opinion of the respondents on how to solve their most important problems.

Method. Questionnaires were sent to the chief school administrator of all agricultural schools in the country. Out of 83 agricultural schools, responses were received from 63 (76%).

Findings and Interpretations. The most commonly faced problems of school administrators were: increasing faculty salaries, hiring qualified faculty members, increasing the efficiency of secretarial and clerical workers, eliminating teaching overloads, non-acceptance of students disinterested in agriculture, minimizing unexcused student absences, providing funds for farm equipment, implements, animals and instructional materials, locating potential employers of high school graduates, enlisting parents' cooperation and providing funds for in-service education.

The majority of the respondents suggested the following ways and means for solving the major problems:

(1) In addition to the increase in Congressional appropriations for the agricultural schools, steps should be taken to increase the schools' farm production income. Consideration should also be given to the establishment of more reasonable tuition fees.
(2) Political interference in the hiring of teachers and other staff members should be eliminated with chief consideration to be given to applicants' training and experience.
(3) Teachers should be relieved of their clerical duties.
(4) Administrators should enforce strict adherence to reasonable admission standards.
(5) Each school should work out its own clearcut policy on how to maintain student discipline.
(6) Each school should establish a placement service to assist its graduates in finding suitable employment in agriculture.
(7) Greater attention should be given to the implementation of a more enlightened public relations policy.
(8) In the absence of funds, schools should utilize in-service techniques which do not require large expenditures.

78. ESTEBAN, PEDRO L. A Study of the Educational Attainment, Service Status, and In-Service Training Needs of Agricultural School Principals and Farm Managers in the Philippines. Thesis, M.S. Ag. Ed., 1965. Araneta University Foundation. Library, Araneta University Foundation, Victoneta Park, Malabon, Rizal.

Purpose. To find out the educational attainment, service status and in-service training needs of agricultural school principals and farm managers.

Method. The survey method of gathering data was followed in this study. A survey questionnaire was tried for the purpose. Ninety agricultural schools and colleges of the Bureau of Education and nine other chartered agricultural colleges participated in the study.

Findings and Interpretations. Majority of the principals and farm managers were graduates of the University of the Philippines College of Agriculture, where they obtained their BSA degrees with majors in agronomy, horticulture, animal husbandry or agricultural education.

All of the school officials met the minimum qualifications for their respective positions at the time they were promoted. Even now that higher standards have been set for their positions, only three of the farm managers do not meet the minimum qualifications.

Majority of the principals attended professional vocational classes. However, fewer than half of the farm managers have attended summer schools since they started teaching. This was mainly due to the need to serve throughout the year.

Majority of the principals but fewer than half of the farm managers were pursuing advanced degrees or enrolled in subjects which pertained to their respective activities. The principals earned 14 units of graduate credit; the farm managers, 12.

All the school officials studied selected the following as important courses they should study in summer: administration and supervision, curriculum development and evaluation; training material preparation; and public relations.

Agricultural school principals spent 7.8 years as classroom teachers, and 3.8 years as either farm managers or instructors. All the school official studied were active members of professional organizations, and they kept themselves abreast of advances in their field by reading recent professional books. They also subscribed to good newspapers and magazines.

The respondents felt that they needed more opportunities for professional growth and believed that they should study the following important areas: analyzing the various vocational courses offered and planning programs to meet local conditions; preparing local teaching materials to enrich instruction; planning and using better teaching techniques; planning and supervising various student projects; and administering and supervising the school farm and other projects.

Insofar as the administrative function was concerned, both groups agreed on the following as important to them: planning and programming goals in education; analyzing personnel needs and staffing; and record-keeping and communication service. They also agreed on the following as their major supervisory functions: curriculum evaluation, course content analysis, and preparing for and conducting demonstrations in teaching.

There was a growing consciousness among the school officials studied of the need to advance in their educational attainment. Such should be favorably met by the educational system which they serve.

It may be concluded that while the agricultural school principals and farm managers today are qualified for their positions, they are conscious of the need for further in-service improvement They should be provided with time and the corresponding rewards for keeping themselves competent. Their desire to further their studies in the most far-reaching finding of this study.

79. GABERTAN, DOMINGO C. A Study of the Professional Qualifications of Superintendents, Supervisors and Principals of Vocational Agriculture in the Philippines. Thesis, M.S., 1962, Louisiana State University, Agricultural and Mechanical College. 41 p. Library, Louisiana State University, Baton Rouge, Louisiana, U.S.A.

Purposes. (1) To determine whether the college preparation and other qualification of vocational agriculture administrators and supervisors meet the requirements of the Bureau of Public Schools; (2) to discover the methods chosen by these administrators and supervisors to improve themselves professionally while on the job, and (3) to

determine the problems of the administrators.

Method. Questionnaires were mailed to superintendents, supervisors and principals of vocational agricultural schools in the Philippines. One hundred two or 94.4 per cent were returned. Additional data were obtained during the conference of school administrators and supervisors in Davao City in December 1961.

Findings and Interpretations.

(1) Only four (25 per cent) of the superintendents met the educational requirements stipulated in the BPS Circular No. 29, s. 1961, as only this number had a master's degree in addition to a BSA degree. Only 13 (81.2 per cent) passed the superintendent of agriculture instruction examination.

(2) Supervisors and principals were required to have a Certificate in Agricultural Education in addition to a BSA degree. All supervisors were graduates of the four-year agriculture course but not one possessed a Certificate in Agricultural Education. However, one had a master's degree and seven (77.8 per cent) finished more than 15 units of graduate work.

Of the 77 principals, 72 (93.5 per cent) were BSA graduates. Only four (5.2 per cent) possessed Certificates in Agricultural Education. However, seven principals had a master's degree and 25 (32.5 per cent) finished more than 15 units of graduate work. All supervisors and principals passed the senior agricultural teacher's examination.

(3) Of the 49 administrators and supervisors who received training grants, 42 (85.8 per cent) were ICA-NEC fellows. Majority attended workshops. Professional books often used were on administration, supervision and methods of teaching. More than three-fourths subscribed to the publication of the Philippine Association for Vocational Education and to the *UPCA Monthly Bulletin*.

80. GABERTAN, LUZ. E. Occupational Placement of Graduates of Teacher-Training Centers in Vocational Agriculture Covering the Period 1950-1960. Thesis, M. S., 1961, University of the Philippines. 35 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes. (1) To discover how many of the graduates were in teaching jobs and what subjects they taught; (2) to determine how many of the graduates were in non-teaching jobs and why; (3) to determine the relationship betwen job placement and sex, age, length of farming experience, length of practice teaching, type of community where they were brought up, college degree and civil service eligibility; (4) to determine the adequacy of training received by the graduates; and (5) to determine the problems met by the teachers now in the field.

Method. Questionnaires were mailed to 1,977 graduates of five teacher-training institutions covering the period 1950 to 1960. Additional data were gathered through interviews. Returns totalled 42.08 per cent or 832 responses.

Findings and Interpretations.

(1) Five hundred thirty-three (64.1 per cent) of the graduates were engaged in formal teaching; 197 (23.6 per cent) were in non-teaching jobs; 48 (5.8 per cent) were pursuing further studies and 54 (6.5 per cent) were unemployed at the time of the survey.

(2) Of the 533 respondents engaged in teaching, 291 (54.6 per cent) taught in primary and elementary schools and 224 (42 per cent) in secondary schools.

(3) Of the 197 respondents engaged in non-teaching jobs, 52 (26.4 per cent) were agricultural extension workers; 38 (19.3 per cent) were farming and managing farms; 30 or 15.2 per cent were plant pest control officers and the rest were engaged in jobs not related to agriculture.

(4) Sex, age, type of community where the graduates were brought up, length of farming experience, civil service eligibility and college degree were related to job placement. Only the length of practice teaching did not show any relationship to job placement.

81. GAGNI, ARSENIO O. The Desirability of Certain Efficiency Factors and Production Goals in Selected Farm Enterprises in the Philippines. Thesis, M.S., 1962. University of the Philippines. 112 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes. (1) To determine efficiency factors in selected farming enterprises; (2) to ascertain the desirability of the efficiency factors; (3) to establish production goals for selected farming enterprises; and (4) to indicate the use of the desirable efficiency factors and production goals in teaching vocational agriculture.

Methods. Questionnaires were mailed to 41 national agricultural and rural high school principals, eight regional experiment stations, and 54 provincial agriculturists. Returns were received from 133 vocational agriculture teachers, 27 regional experiment station personnel and 40 provincial agriculturists. Subject-matter specialists at the U. P. College of Agriculture were also consulted.

Findings and Interpretations. Efficiency factors such as eggs per hen per year and yield per hectare were identified for 14 enterprises, namely, poultry layers, broilers and pullets; swine feeders and breeders; beef cattle; dairy cattle including carabao; lowland and upland rice; wet and dry season corn; tomato; cabbage and onion. Standards of achievement were recommended for each factor.

82. GAPASIN, CELEDONIO M. A Survey of the Directed Farming Program of Secondary Vocational Agriculture Students at the Central Luzon Agricultural College, Nueva Ecija, with a View of Identifying Weaknesses and Strengths for the Development of a Supervised Farming Program. Thesis, M.S., 1963, Central Luzon Agricultural College. 130 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purpose. To identify the weaknesses and strengths of the directed farming program of secondary vocational agriculture students at the Central Luzon Agricultural College.

Method. Personal interviews were conducted with 350 student farmers. The survey questionnaire procedure was also employed.

Findings and Interpretations. Of the 350 student farmers studied, 87 per cent were sophomores and juniors. Their main enterprises were rice and vegetables. The core of their directed farming program was rice farming in which groups of two to four students cultivated areas ranging from one to five hectares. No written agreement between the College and the student farmers was made concerning the farming program.

Although the College had at its disposal 96 work animals, 90 plows, and 90 harrows for the use of the 126 student farmer groups, student farmers invested an average amount of ₱33.12 on farm tools, equipment, and livestock. The students' savings deposits for two academic years ranged from ₱250.00 to ₱500.00.

The students' farming projects were visited occasionally by farm managers

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and rarely by vocational agriculture teachers. Six out of 11 vocational agriculture teachers favored the combination of the block and cross-sectional systems of course organization. The double period (40 minutes a period) was too short to complete certain class activities in agriculture and farm mechanics and the teaching equipment was inadequate to meet the needs of high school vocational agriculture students

83. GONZALES, FELICITAS E. A Study of the Establishment in Farming of Graduates of Vocational Agriculture in the Ilocos Region. Thesis, M.S., 1964. University of the Philippines. 73 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes. (1) To determine the characteristics of vocational agriculture graduates engaged in farming; (2) to discover the factors that contributed to their getting established in farming; and (3) to find out their problems in becoming established in farming.

Method. An interview schedule was used to collect data from 120 male farmers who graduated from three agricultural schools in the Ilocos Region from 1941 to 1956.

Findings and Interpretations. Of 895 male agricultural graduates, 120 were engaged in farming. Their average age was 24.3 years and their average residence in the barrio 24.2 years. Only 31.7 per cent of them were married, with 24.4 years as the average age at marriage. The average number of years in farming and operating their present farms were 12 and 4.2 respectively. More than 15 per cent of the farmers had reached the collegiate level of education, and more than 51 per cent went directly to farming after graduation from high school. Forty and eight-tenths per cent of the respondents were owners, 42.5 per cent were part-owners, and 16.7 per cent were tenants. Their annual farm income ranged from ₱300 to ₱8,000 with an average of ₱1993. The methods used in getting started in farming were working on the home farm with indefinite (38.3%) or definite (20.0%) share in income, and tenancy (14.2%).

The factors which contributed most to the former graduates' establishment in farming were: (1) parents owned farms and assisted by providing capital, dwellings, farm buildings, work animals, tools and equipment; (2) training received in vocational agriculture, particularly supervised farming activities; (3) farm background and farm experience; and (4) capital from personal savings.

The major problems encountered in becoming established in farming were as follows: (1) lack of capital in financing the farm business; (2) high cost of suitable farm land, proper farm equipment, and trained work animals; (3) poor soil fertility, irrigation and drainage; (4) pest and disease control; (5) planning an effective cropping program; (6) conserving and providing ample food for the family; and (7) marriage.

84. GUTIERREZ, SERVILLANO G. The Effectiveness of the Agricultural Education Curriculum in C.L.A.C. Toward the Development of Teachers of Vocational Agriculture. Thesis, M.S., 1960, Central Luzon Agricultural College. 121 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purpose. To obtain information on the effectiveness of the agricultural education curriculum of the Central Luzon Agricultural College toward the development of vocational agriculture teachers and to identify the needs for revision of the four-year agricultural education curriculum in CLAC.

Method. Personal interviews with CLAC-trained collegiate students, educators, government officials, and secondary agricultural school principals were undertaken. Survey questionnaires were directly sent to the 41 CLAC-trained BSAE graduates at their respective stations.

Findings and Interpretations. The training received by 41 CLAC-trained vocational agriculture teachers studied was rated only good thus leaving much room for improvement. The deficiencies in agricultural training of vocational agriculture teachers may be remedied by the adoption of the following measures: (1) improvement of teaching aids; (2) regular in-service training of the members of the staff, and (3) making available more satisfactory facilities for the training of vocational agriculture teachers.

For more effective instructional supervision, the Central Luzon Agricultural College should be re-organized into several departments of instruction for the purpose of handling nine proposed fields of specialization, namely: agronomy, horticulture, animal husbandry, poultry husbandry, agricultural economics, farm mechanics, economic entomology, plant pathology, and elementary agriculture and industrial arts.

These proposed departments of instruction, exclusive of the physical education and military science and tactics, should be geared to the needs of the secondary agricultural schools, namely: teacher-education and extension, secondary agriculture, agricultural engineering, home technology (home economics), biological sciences, physical sciences, animal husbandry, poultry husbandry, agricultural economics, agronomy and horticulture, and languages.

Admission requirements should be modified such that only students capable of undergraduate work should be admitted. An entrance examination will identify students who should be encouraged to take the BSAE curriculum.

For the purpose of developing farm skills, student teachers should be allowed to work with the farm manager in administering and supervising various animal and crop projects. Student teachers should have sufficient time to work with the farm manager as apprentices, particularly in projects directly related to their major fields of specialization.

The instruction of secondary agricultural education students should be used extensively as a laboratory for the training of student teachers, particularly in line with supervised farming program.

85. HICARO, VICENTE G. A Study of Student Problems in the Don Severino Agricultural College, Indang, Cavite. Thesis, M.S.Ag.Ed., 1968, Araneta University Foundation. Library, Araneta University Foundation, Victoneta Park, Malabon, Rizal.

Purpose. To find out the outstanding problems of students enrolled during the 1966-1967 school year in the Secondary Department of the Don Severino Agricultural College, a government-chartered institution in Indang, Cavite

Method. The Mooney Check List — High School Form, with some modifications, was used to determine the most outstanding problems of the students. All first-year students (155 males and 87 females) and all fourth-year students (62 males and 42 females) were included in this survey.

Findings and Interpretations. The five most troublesome areas for the four categories of students studied are shown below in the order of importance:

First-year		*Fourth-year*	
Boys	*Girls*	*Boys*	*Girls*
Economics	Interests	Economics	Economics
Health and development	Economics	School	School
Interest	Health and physical development	Health and physical development	Social
School	Leisure time	Interests	Personal
Religious life & church affiliation	School	Leisure time	Health & physical development

The number of students' problems varied with the average being 28.85 for first-year males, 17.60 for fourth-year girls, 17.13 for fourth-year boys and 13.27 for first-year girls.

86. IGNAO, LORETO M. A Study on the Pupil Drop-outs in Iriga District. Senior Study, 1964. 33 p. Camarines Sur National Agricultural School, Pili, Camarines Sur.

Purposes. To find out the causes of drop-outs in Iriga district and to determine the extent to which pupils within the district dropped from school.

Method. The method applied in the research was the normative survey which consisted of personal interviews with teachers in their respective stations. Information was also obtained from various educational journals and BPS 18-B and 18-C forms for the school year 1961-1962.

Findings and Interpretations. The causes of drop-outs were the lack of interest of both parents and pupils, irregular attendance, numerous financial contributions, dislike for teacher, dislike for schoolwork, inability to get books, influence of bad companions, and fear of national examinations. Most teachers said that in spite of their initiative to guide pupils it was difficult to counteract the causes of drop-outs such as distance from school, dislike for teachers, and the dislike for schoolwork.

It was found that the percentage of drop-outs was 61 per cent from grade I to grade VI.

The following were recommended: (1) a classroom teacher should know how to recognize the symptoms of ill health in children; (2) teachers should know the home environment of pupils, and should talk with parents and the children about their problems; (3) teachers should try to discover the social needs of children and plan for them a more satisfying way of relating with each other; (4) teachers should create a feeling of friendliness with a warm atmosphere of kindness and consideration; (5) teachers should encourage wise use of leisure time; (6) the government should refrain from too many school fund drives; and (7) parents should develop a sense of responsibility in their children.

87. JARMIN, M. V. and A. O. GAGNI. Prediction of Academic Success of Freshman Students in the College of Agriculture, University of the Philippines. The Philippine Agriculturist. pp. 194-203, Vol. 48, Nos. 4-5, 1964.

Purpose. To find out the relationships between students' aptitude and achievement entrance tests scores and their academic success in college.

Methods. Two hundred twenty-four randomly selected students of the 1960-61 and 1961-62 entering freshmen classes were subjects of the study. Final grade at the end of the first semester and average grade at the end of the year vs. high-school average grade and entrance test score were tested using the Doolittle method.

Findings and Interpretations. High-school average grade had a consistent moderate positive correlation with the final grade in the first semester courses and a high positive correlation ($r = .890$) with academic average grade at the end of the first year. The two freshmen tests did not correlate as high as the high-school average grade with final grade in first semester courses and average grade at the end of the first year. The achievement test score tended to correlate higher in social science and humanities courses than the aptitude test. In mathematics and biological sciences, however, the reverse relationship was observed. It was found that the equations for predicting first year academic average grade and the final grade in Agricultural Education 10 were moderately valid with coefficients of correlation

between predicted and actual grades of .560 and .539, respectively. Low predictive validity was noted in equations for predicting final grades in English 2, chemistry and zoology subjects.

88. JOVELLANOS, RAYMUNDO E. A Study of the Farm, Family and Educational Backgrounds and the Curricular Pursuits and Vocational Guidance Needs of Collegiate Students Enrolled at the Central Luzon Agricultural College. Thesis, M.S., 1963, Central Luzon Agricultural College. 38 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purpose. To determine the farm, family and educational backgrounds, curricular pursuits and vocational guidance needs of students.

Method. Questionnaires were given to 1,130 CLAC students enrolled in six different curricula.

Findings and Interpretations. The most important factor that influenced the choice of the agriculture or home economics curriculum was the proximity of the home to the College. No positive relationship between curricular choice and the type of high school attended and the curriculum pursued was noted. The fact that the student's father was in farming was found to be significantly related to the choice of agriculture as a profession. About 26 per cent of the students surveyed shifted to other curricula, the major reasons for such changes being better job opportunities, financial hardships, inability to tackle the physical and mental work, parental influence, and late enrollment.

Important student-designated needs were for:

(1) more subjects related to their areas of specialization
(2) additional agricultural education subjects for teaching qualification in the agricultural engineering and home economics curricula
(3) reduction of the number of hours for practicum and the development of skills related to classroom studies
(4) more practical and actual group games in physical education instead of boring lectures and lessons
(5) reduction of big lecture and laboratory classes

89. JULIANO, PRISCILLA A. Evaluation of the Student Teachers in Vocational Agriculture at the U.P. Rural High School, College, Laguna, Thesis, M.S., 1966. University of the Philippines, 55 p. Library, U.P. College of Agriculture, College, Laguna.

Purpose: To determine how U.P. Rural High School students and their teachers would evaluate their student teachers.

Methods. An instrument with listed characteristics of student teachers was utilized in this study. Nine student teachers were the subjects with 126 students and two cooperating teachers as evaluators.

Findings and Interpretations. Both students and their teachers evaluated the student teachers favorably on the majority of the traits listed in the evaluative instrument.

90. LASAP, VIRGINIA M. Some Factors Associated with Students' Ability to Graduate from the U.P. College of Agriculture. Thesis, M.S., 1965, University of the Philippines. 75 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes. (1) To determine the background of students admitted to the U. P. College of Agriculture in the school year 1960-1961; (2) to determine the problems that confront college students; (3) to identify selected subject matter areas where students experienced dificulty; and (4) to deter-

mine how some factors relate to students' ability to graduate from the U. P. College of Agriculture.

Method. Data were collected from official student records. Records were complete for 313 of the 339 new freshmen of school year 1960-61. Forty-four per cent of this group persisted up to school year 1963-64. Of these, 84 per cent were interviewed for additional data.

Findings and Interpretations. The ratio of male to female was six to one; their average age was 17 years. Out of 313 students, 46.3 per cent were from barrios, 38 per cent from poblacions, 15 per cent from cities, and the remainder unstated. More than three-fourths (85.3%) of the students were entirely financially supported by their parents. The fathers of 32.3 per cent of the students were farmers, 20.1 per cent professionals, 14.4 per cent skilled workers, 10.9 per cent businessmen, 9.3 per cent clerical workers and the remainder otherwise classified.

Most of the respondents (56.87 per cent) were graduates of private high schools; the remainder came from public high schools. Only 59 students went through the vocational agriculture high school course. Eighteen students were high school valedictorians while a like number were salutatorians.

The student-encountered problems centered chiefly on academic affairs such as learning how to budget time wisely (69.10%), acquiring a good writing and speaking vocabulary (60.82%), and concentrating when studying (55.41%).

The highest percentage of failures were in Mathematics 3 (61.78%), Mathematics 2 (51.38%) and Chemistry 2 (47.46%) while the lowest were in Botany 1 (7.24%) and Agricultural Education 21—Elementary Psychology (15.23%).

Out of the 15 factors studied, only six were found to be significantly related to the ability to graduate from college. These were: (1) keeping a regular study schedule; (2) attendance at the orientation session; (3) family atmosphere; (4) discipline at home; (5) types of problems encountered; and (6) types of source of support for the students.

Out of the 339 students who enrolled in 1960-1961 only 19 or 5.60 per cent were able to graduate after four years in college. Those who failed to do so did not finish their theses or special problems, failed courses, and carried less than a normal load due to scholastic deficiency, conflicts in course schedules, or being student assistants.

91. LIU, PETER. Use of Role Analysis Toward a Theory of Leadership in Administration in Higher Education. Thesis, Ph.D., 1965, University of the Philippines. 331 p. Library, U. P. College of Agriculture, College, Laguna.

Purpose. The purpose of this study was to develop a theory of leadership in administration in higher education.

Method. Data were gathered through questionnaires designed for comparison of faculty members and administrators' opinion about the department chairman's role in the University of the Philippines.

Findings and Interpretations. Ten related aspects of administrative leadership were studied: (1) philosophical orientation in administration, (2) administrative values, (3) principles of administration and organization, (4) administrative process, (5) administrative structure, (6) administrative function, (7) administrative practices, (8) leadership behavior, (9) group dimensions, and (10) job satisfaction.

All administrators and professors, whether democratic or authoritarian, agreed closely on almost all the commonly accepted ten principles of organization and administration. They also perceived that the chairman has varying amounts of power for his seven

administrative functions. The professors likewise tended to think that administrators have more power than the administrators think they have. The administrators as well as the professors preferred a lower degree of power in all administrative functions for the chairman than what is actually held at present.

There were more "democratic" than "authoritarian" respondents who agreed with a proposed organizational set-up of the school. In the selection of administrative officers, however, the "democratic" did not indicate any preference for a more democratic way than the "authoritarian."

Both administrators and professors agreed that the chairman performs nearly all 21 administrative functions and considered these functions as obligatory. There was a tendency for administrators to claim a higher degree of performance of these functions than the professors were willing to attribute to them. The administrators had more uniform expectation and evaluation of their role performance than the professors.

The administrators and professors exhibited consensus as to who should be involved in 11 administrative practices and who are actually involved in carrying out these practices. They also agreed that present administrative practices are less democratic than what they consider appropriate. It was noted that there was more consensus on the normative than on the behavioral aspects of these administrative practices.

The administrators rated themselves higher on the consideration dimension than did the professors, while the latter rated the chairman lower on the initiating structure dimension than did the administrators. Administrators who rated themselves high or were rated high by professors on the initiating structure dimension also scored high on the consideration dimension. Both "authoritarian" and "democratic" administrators scored equally high on both dimensions of leadership behavior.

The researcher recommended that leadership in administration be empirically defined and its effect on human behavior investigated. He concluded that leadership is not the property of an individual but a complex relationship among variables such as attitude, needs, personal characteristics of the followers, characteristics of the organization, the situation, and the traits and characteristics of the leader.

92. MAMARIL, ALICE P. Role Expectations, Role Performance, and Job Satisfaction among Administrators and Teachers in the Agricultural Schools. Thesis, M.S., 1963, University of the Philippines. 181 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes: (1) To find out how teachers and administrators perceive the roles of the administrator and the extent to which the roles are actually performed; (2) to examine the degree of consensus among and between administrators and teachers regarding the roles expected of the administrator and his actual performance of these roles; (3) to investigate the degree of congruence between the roles expected of the administrator and his role performance from the point of view of both administrators and teachers; and (4) to determine the factors associated with job satisfaction among administrators and teachers.

Method. Separate questionnaires were sent to 91 administrators and 715 teachers of agricultural schools throughout the country. A total of 77 (83 per cent) administrators and 525 (74 per cent) teachers responded.

Findings and Interpretations.

(1) Both role definers think that the administrator is obliged to perform all the five functions under "general supervision over school."

(2) In ten out of 16 administrative practices, teachers and administrators tended to allocate greater

responsibility to the administrator and to the teacher than to the General Office.

(3) Of the 70 comparisons made between the degree of consensus of the administrators' and teachers' responses, only 23 showed statistically significant values. The role segment with the least amount of variation is that which deals with general supervision over schools.

(4) In the administrative practices where 32 comparisons were made, only 12 yielded statistically significant values.

(5) Administrators and teachers showed a high degree of congruence in their responses for roles expected of the administrator and his actual performance. In 24 out of 35 functions included in this study, a higher percentage of administrators than teachers exhibited responses in which expectations and corresponding performances were congruent.

(6) The following practices exhibited high percentage of responses indicating that actual administrative practices were congruent with teachers' and administrators' ideal definitions: planning school projects, supervising curricular activities, child attendance regulations, evaluating instructions and reporting accomplishments. For the practices on hiring a new teacher, planning a new building, and initiating policies, the administrators were divided in their assessments of the actual practice in relation to what is regarded as ideal.

(7) Teachers and administrators whose estimates of the administrator's actual performance deviate from the model responses or the "group norm" tended to have lower job satisfaction scores.

(8) Positive deviation scores were found to have a statistically significant negative correlation with job satisfaction.

(9) Teachers with the lowest salary have the highest mean job satisfaction score.

(1) Those who were assigned to the rural high schools exhibited the highest mean job satisfaction score (42.05) compared to 40.60 for the national agricultural schools and 38-21 for the national regional agricultural schools.

(11) Higher mean job satisfaction scores were obtained for teachers in Visayas and Luzon than for those located in Mindanao. Among administrators there were no statistically significant differences in job satisfaction scores as far as regional location of school assignments was concerned.

(12) Educational attainment, school attended, civil service eligibility and sex were not related to job satisfaction. Superintendents obtained a higher mean job satisfaction score than principals. Teaching assignment did not make any difference in job satisfaction among teachers but civil status did. Unmarried teachers had higher job satisfaction scores than the married ones.

(13) Teachers' length of service and job satisfaction were positively correlated. Among administrators, length of service was not related to job satisfaction.

93. MEESORN-IEM, SAMRAM. An Analysis of the Present Undergraduate Curriculum in Agricultural Education of Agricultural Colleges and Universities in the Philippines. Thesis, M.S. 170 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purpose. The study aimed at ascertaining the relative importance of the

major areas in the undergraduate curriculum and the relative importance of subject-matter areas in each major area. An attempt was made to identify the strengths and weaknesses of the curriculum, and to determine the attitude of MSAE and BSA (major in Agricultural Education) vocational agriculture teachers towards the teaching profession.

Methods. Institutional catalogs and informational materials of five universities were the sources of data. Other information was obtained from a sample of 200 vocational agriculture teachers by means of questionnaires.

Findings and Interpretations. The findings show that science and humanities were more important than the other major areas of the curriculum, but the major field of specialization and electives were relatively given less emphasis.

In the main areas studied, the following subject-matter areas were the most important: in technical agriculture, agronomy and horticulture; in science, biological science; in professional education, principles and methods courses concerning agricultural education; and in humanities, Spanish.

Data from the opinion survey revealed that the majority of respondent vocational agriculture teachers took up the pre-service training in agricultural education on their own volition, and they felt that the quality of instruction they received was average or good. They suggested that courses such as educational research methods, farm mechanics, agricultural chemistry, English and those in their major subject matter area be either offered or broadened both in breadth and depth. English, Chinese, Japanese, German, and French were suggested as substitutes in the event the requirement of 24 units in Spanish were reduced. It was further suggested that farm practice, apprenticeship, and the writing of special problems be required. The survey also revealed the respondents' consensus that the 12-week off-campus student teaching and one full semester of internship will be most advantageous if the pre-service training in agricultural education is lengthened to a five-year course. The board examination was deemed unnecessary for vo-ag teachers. Instead, in-service training was suggested to keep them up-to-date with the latest trends in teaching. Statistics and tests and measurements were reported the most useful for their jobs.

In the light of the findings, it was concluded that some courses in all major areas should be added to the curriculum to give it breadth and depth necessary for the service. In-service training was considered as important as pre-service training and should be regularly scheduled. To coincide with the suggested increase to a five-year course, farm practice, apprenticeship, internship, teaching, and conducting special problem work should be added.

94. MELCHOR, MARIO R. Desirable Experiences in Student Teaching in Vocational Agriculture in the Philippines. Thesis, M.S., 1964, University of the Philippines. 99 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes. To discover: (1) the experiences needed by student teachers during their student teaching period; (2) the opinions of the experts and vocational agriculture teachers on the desirability of each teaching experience; and (3) the relationship between value judgment of the experts and vocational agriculture teachers.

Method. One hundred eighty-two professional teaching experiences were incorporated in a nine-section check list developed after a comprehensive study of available literature. These experiences were rated by 15 experts and 166 vocational agriculture teachers.

Findings and Interpretations. Of the nine areas studied, the experts and the agriculture teachers considered

teaching experiences in the following areas to be most important: classroom management, directed farming projects, advising and directing, FFP, public relations, and supervised farming projects. Those considered less important included professional improvement, planning the school program, conducting an extension program, and guidance and counseling.

When the ratings of the experts and the agriculture teachers for individual items in each of the nine areas were correlated, a high rank order correlation was found in three areas of teaching experience: advising and directing FFP, conducting an extension program, and guidance and counseling.

95. MEÑEZ, ALEJANDRO D. An Analytical Study of the Professions or Occupations the Students Plan to Take After Graduation. Non-Thesis Study, 1968, Aklan Agricultural College, Banga, Aklan.

Purposes. To determine the professions or occupations the students plan to enter after graduation and to know the factors that influenced their selection.

Methods. Questionnaires were distributed to the 100 graduating students of the four-year secondary vocational course in Aklan Agricultural College. Personal interviews were also conducted.

Findings and Interpretations. Twenty-eight per cent of the students were 17 years old; the youngest was 15 and the oldest 24.

The majority (65%) of the parents were farmers.

Sixteen per cent signified intentions of enrolling at the Aklan Agricultural College for a Bachelor of Science in Agriculture degree.

The majority intended to take up the following courses: eight per cent, Bachelor of Science in Education; nine per cent, Bachelor of Science in Elementary Education; ten per cent, law; three per cent, commerce; ten per cent, medicine; 16%, engineering; nine per cent, nursing, and three per cent, dressmaking. Of the 22 students who could not continue their studies, 15 stated they would go into farming while seven said they would apply as office helpers. When queried as to why they did not plan on continuing their vocational courses, the answer was that vocational courses would not give them "quick returns" for money spent during their studies. Some answered they were not inclined to become farmers. The rest said they had to earn so as to support the studies of brothers and sisters in school.

The educational attainment of the students' male parents were distributed as follows: ten per cent, degree holders; 27%, high school graduates; 37%, elementary school graduates; 22%, non-graduates of the elementary school. Only eight per cent of the fathers had not gone to school.

Female parents' qualifications were distributed as follows: eight per cent, degree holders; 20%, high school graduates; 42%, elementary school graduates; 20%, non-elementary school graduates. Eight per cent did not go to school at all.

Seventy per cent were supported through school by parents; the school expenses of 27% were shouldered by relatives. Three percent said they were on self-support. Interviews revealed that they earned money for their schooling from piggery, poultry or vegetable gardening projects.

The researcher concluded that vocational guidance should play an active role in the students' choice of profession or occupation.

96. NOVERO, WALFRIDO PATRIARCA. Farm Mechanics Skills Needed by Prospective Teachers in Vocational Agriculture in the Philippines. Thesis, M.S., 1959, Cornell University, 87 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes. (1) To develop a list of farm mechanics skills for which pre-

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service training is needed by teachers of vocational agriculture so they may teach them in the Philippine agricultural high schools; (2) to determine the farm mechanics skills for which pre-service training is needed by teachers to enable them to perform the service and maintenance functions required by them in the schools; and (3) to discover the instructional value of selected farm mechanics skills based on teacher rating.

Methods. Questionnaires were distributed to farm mechanics teachers in the agricultural schools supervised by Bureau of Public Schools. The teachers were asked to indicate which skill they taught and used. They were also requested to rate each skill as to its importance in teaching farm mechanics.

Findings and Interpretations. The author identified a number of specific farm mechanics skills which should be included in pre-service teacher training programs. Needed skills were classified in the following areas of subject matter: woodworking, tool conditioning, sheet-metal work, cold metal work, blacksmithing, plumbing, concrete work, painting, oxy-acetylene welding, electric arc welding, tractor and gas engine maintenance, farm machinery maintenance, sketching and drawing, farm building construction, water supply skills, farm fencing, soil and water management, and rural electrification.

97. ORDEN, DIONISIO O. Job Placement of College Graduates of the Central Luzon Agricultural College from 1960 — 1964. Thesis, M.S., 1967, Central Luzon State University. 65 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purposes. To determine the following: (1) the nature of employment of graduates of the different curricula; (2) the salary rates; (3) the difficulties encountered in securing employment; and (4) the percentage of graduates actually engaged in farming.

Method. Questionnaires were prepared and mailed to 594 graduates. Personal interviews were also conducted.

Findings and Interpretations. The majority (69.1 per cent) of the 594 CLAC alumni were found engaged in agricultural activities, either in public or private schools, from grade-school to college levels, with a maximum average monthly salary of ₱333.03 and a minimum of ₱181.03. Graduates who were not in the teaching profession had an average monthly salary of ₱278.00 (maximum) and ₱180.00 (minimum). Only 37 or 6.23 per cent of the graduates went into actual farming.

The difficulties encountered in securing jobs, arranged from the highest to the lowest, were as follows:

(1) Lack of political backers.
(2) Lack of major or minor subjects.
(3) Lack of civil service eligibility.
(4) Degree not fitted to the job applied for.
(5) Lack of previous experience.
(6) Poor scholastic record.
(7) Poor health.

98. PAINAGAN, ALFONSO T. Activities of the High School Students Living in the Student Barrios of the Mindanao Agricultural College. Thesis, M. Ag. Ed., 1965, Mindanao Agricultural College. 55 p. Library, Central Mindanao University, University Town, Musuan, Bukidnon.

Purposes. To determine: (1) the students' major and minor projects and their production practices; (2) the day-to-day activities of the student; and (3) student participation in religious and social activities.

Methods. Individual records and annual reports on production and farm accomplishments of the independent farmers of the high school department were utilized. In addition, the questionnaire, actual observation and interview methods were used.

Findings and Interpretations. Eighty two and eleven-tenths per cent of the student farmers were sons of farmers and more than 65% were reared in the barrios. All of them conducted rice and corn projects. Production was only 24.88 cavans per hectare of palay and 14.76 cavans of corn in 1964. Fifty-one per cent raised swine and about 63 per cent raised poultry. Each group reared four pigs. Those who raised poultry reared 17 birds. Approved farm practices were not applied in swine and poultry projects, but majority of the student farmers followed approved production practices in rice and corn projects. During off-hours, the students cooked their meals, cleaned surroundings, pastured work animals, gathered fuel, and washed their clothes. About 88 per cent of the students were Roman Catholics and frequently attended religious services. Few students used the library. Eighty per cent enjoyed attending social affairs. Their FFP participation was generally poor.

In the light of the findings of the study, the following were recommended:

(1) Supervised farming should be the core of instruction in vocational agriculture, with particular stress on approved farm practices. The scope of the projects of each farmers' group should be broadened to include productive projects, improvement projects and as many supplementary farm practices as are needed by the students.

(2) Efficient and business-like methods of poultry and swine raising should be encouraged.

(3) The student should devote the farm laboratory work period to his own farm projects.

(4) Vocational agriculture teachers should continuously guide students in their farming activities and academic work.

(5) Industry and the proper use of leisure time should be stressed.

(6) A policy of advising students who do not live up to farm goals to transfer elsewhere should be adopted.

(7) Social leadership activities should be conducted as a regular part of the school program. Active participation of the students must be encouraged. The holding of social hours may be an important undertaking of the FFP organization and the social studies classes.

(8) The FFP organization should be functional, and the students should plan their work program so that the goals set are realistic, practical, interesting, workable and applicable in their present and future lives as farmers.

(9) For more effective use of time, the student's daily schedule should alternate between his academic classes and farming.

99. PALLER, ENRIQUE N. The Occupational Status of Agricultural Education and Home Economics Graduates of the Mindanao Agricultural College. Thesis, M. Ag. Ed., 1965, Central Mindanao University. 24. p. Library, Central Mindanao University, University Town, Musuan, Bukidnon.

Purposes. To determine the occupational status of agricultural education and home economics graduates of the Mindanao Agricultural College, their attitude towards their occupation, and the factors that influenced their choice of occupations.

Method. Questionnaires were sent to a total of 295 agricultural education and home economics graduates of the Mindanao Agricultural College.

Findings and Interpretations.

(1) Most of the agricultural education and home economics graduates of the Mindanao Agricultural College were in teaching; a small number were engaged in non-teaching jobs.

(2) Graduates engaged in teaching taught either subjects in their field of study or subjects related to their training and experience.
(3) Those in non-teaching jobs were in fields related to their training.
(4) More than 50 per cent of the agricultural education and home economics graduates held jobs with temporary status; and one-fifth had provisional appointments and almost the same number were permanent.
(5) Most of the graduates (80.59 per cent) were satisfied with their work.
(6) The graduates were influenced in the choice of their occupations by the following factors: fitness for the work, liking for the job, need for immediate income, good pay, and good working conditions.

100. PAVA, HERMINIO M. Cost and Returns Study of Some Crops Raised by Musuan Student Farmers. Thesis, B.S.A., 1965, Central Mindanao University. 37 p. Library, Central Mindanao University, University Town, Musuan, Bukidnon.

Purposes. To determine the resources of the farm and of the student farmers, how these resources were used, and to locate the weak and strong points of the various student enterprises.

Method. Twenty-three groups picked at random from Dologon, Kibalagon, and Green Valley Farms, with a total of 136 student-members 16 to 19 years old served as cooperators.

Findings and Interpretations. The average size of rice farms was one and a half hectares in Kibalagon and Dologon, and one hectare in Green Valley while that for corn was one-half to one hectare in Green Valley, 2.42 hectares in Kibalagon and 2.5 hectares in Dologon. The yield was 25.30 cavans of palay per hectare and 8.8 cavans of shelled corn per hectare. Each hectare required an average of 174.34 man-days and 34.15 animal-days for all operations in rice and 28.16 man-days and 17.93 animal-days in corn.

The total value of rice produced per hectare was ₱444.90 and for corn, ₱74.91. One hectare of rice incurred an expense of ₱223.44 and for corn, ₱18.71 excluding labor. The net farm income per hectare of rice was ₱221.46 and from corn ₱56.20 The student farmer's computed labor income per hectare was ₱216.11 for rice and ₱55.96 for corn. Estimated value of operator's labor was very high and resulted in a loss of ₱127.22 per hectare for rice and ₱0.12 per hectare for corn.

Produce was shared by the students and the school on the 80-20 basis for both rice and corn. Farm implements and carabaos were provided by the school. Seed, fertilizer, and chemicals were also provided by the school but were paid for after the crops were harvested.

In order to determine if costs and returns of production even up, student farmers should keep accurate farm records. These records could also show farmers which enterprise would give the most return per unit area.

101. PEREZ, CIRILO R. A Study of the Economic Status of the Camarines Sur National Agricultural School College Students. Senior Study, 1964. 23 p. Camarines Sur National Agricultural School, Pili, Camarines Sur.

Purpose. To find out the economic status of the college students.

Method. A questionnaire covering the social and economic status of parents and students was given to 150 college students in the Camarines Sur National Agricultural School, of whom 93 accomplished the questionnaire.

Findings and Interpretations. The ages of the students varied greatly

and there were more single students than married ones. Most of the students came from general secondary schools. The selection of the school was determined to a great extent by the parents, most of whom were farmers with low income. The main support received by the students came from their parents. Sixty per cent of the students lived on the school campus. The most popular recreation was going to movies.

In order that the study would help students, instructors, and administrators in promoting student welfare for quality education, the following recommendations were submitted:

(1) There should be better publicity on the collegiate courses offered by Camarines Sur National Agricultural School to attract more students from all walks of life.
(2) Additional cottages and recreational facilities for college students and faculty members should be provided.
(3) Farmer-parents should be invited to attend adult summer classes to upgrade their methods of farming with the end view of increasing their income.

102. RUMA, MAURO L. A Study on the Related Subjects Taught by Vocational Agriculture Teachers Teaching in Secondary Agricultural Schools. Thesis, M.S.Ag.Ed., 1967, Araneta University Foundation. Library, Araneta University Foundation, Victoneta Park, Malabon, Rizal.

Purpose. To find out the related subjects taught by vocational agriculture teachers in secondary agricultural schools, their problems encountered, and the subject-matter desired for in-service training.

Method. A set of 405 questionnaires was prepared and sent to 341 teachers in 81 agricultural schools of the Bureau of Vocational Education. Questionnaires were also sent to the secondary department of state agricultural colleges and universities such as the U.P. College of Agriculture, Central Luzon University, Central Mindanao University, and Mindanao Institute of Technology.

Findings and Interpretations.

(1) Most of the teachers were married. Their mean age was 31.4 years while the median was 30.9 years.
(2) The majority (88.7 per cent) of the respondents earned B.S.A. or B.S.Ag.Ed. degrees, while 58.6 per cent graduated from the U.P. College of Agriculture or Central Luzon University. Araneta University graduated 17.1 per cent of the teachers and ranked first among the private institutions in the number of agriculture teachers trained.
(3) While 61.4 per cent were teaching related subjects at the time of the study, 79.6 per cent had taught such subjects for at least one year.
(4) The most important problems encountered were: tiredness from field work; inadequacy of time, references and other library facilities; lack of laboratory equipment, tools, and other instructional facilities; inability to make test questions and evaluate results; inadequate knowledge of the appropriate methods and techniques of teaching; and inadequate training and experience in teaching.
(5) The most frequently suggested topics and other recommendations for in-service training were: the teaching of applied science, the principles and methods of teaching related subjects, techniques in making teaching aids, devices, and other materials for instruction, teachers should be permitted to take courses on official time, and demonstration

classes should be conducted in the teaching of related subjects.

103. SALCEDO, FELIX N. A Comparative Study of the Written Reproduction (Pilipino Version, 1963) of the Philippine National Anthem and Patriotic Pledge by the College and High School Students in the Visayas Agricultural College, Biliran Rural High School and Villaba Rural High School. Staff Study. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the ability of the students in reproducing the *Pambansang Awit* and the *Panatang Makabayan* in writing.

Method. All students were tested on their ability to write the *Pambansang Awit* and the *Panatang Makabayan*. Evaluation was based on accuracy in spelling, syllabication, sequence, and completeness.

Findings and Interpretations. The average combined scores, in per cent, of the students in each school tested were as follows, arranged in order of descendency: Villaba Rural High School, 71.23; VAC College Department, 67.64; VAC High School Department, 56.41; and Biliran Rural High School, 56.32. More than five per cent of the students failed the test.

The researcher noted that the greatest weaknesses were in spelling and in the omission of words, phrases, verses, and stanzas. He concluded that students do not know the National Anthem and the Patriotic Pledge well enough and that steps should be taken, especially by teachers of Pilipino, to remedy the situation.

104. SALCEDO, FELIX N. A Study of the Background of All the First Year Students Taking the Agriculture and Homemaking Teacher-Education Curriculum leading to the Degrees of Bachelor of Science in Agricultural Education (BSAED) and Bachelor of Science in Agricultural Homemaking (BSAH) Respectively, at the Visayas Agricultural College, Baybay, Leyte, in the School Year 1959-1960. Staff Study, 1960. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To gather, tabulate and analyze data secured in the form of general information for more intelligent and more effective guidance activities on the part of students, advisers and administrators.

Method. A combination of questionnaire and interview methods were used, with 87 college freshmen as respondents.

Findings and Interpretations. The group was composed of 44 women and 43 young men, of whom 97 per cent were single. Sixty-five per cent came from government high schools and the rest from private institutions. Forty-four per cent graduated from government agricultural high schools. Of these government high school graduates, 79 per cent came from the Visayas Agricultural College.

Sixty per cent of the students' parents were farmers; 13 per cent teachers; and six per cent fishermen. The rest were common laborers, fish vendors, carpenters, barbers, storekeepers and housekeepers.

Eighty per cent of the respondents finished high school only recently. No less than 34 per cent graduated with honors from the elementary schools; about 29 per cent were honor students when they graduated from secondary schools. The youngest was 16 and the oldest 27 years. All had decided to be teachers even before they entered the Visayas Agricultural College.

The enrollees came from eight provinces with Leyte accounting for about 75 per cent, Cebu ten per cent, Samar five per cent, Masbate and Surigao three per cent each. The rest were distributed equally among Surigao, Bohol, Negros Occidental and Iloilo.

No less than 65 per cent planned to teach in agricultural schools, 32

per cent in general schools, and three per cent in college. Their choice subjects for teaching (arranged from the highest to the lowest) are: (1) agronomy, (2) horticulture, (3) animal husbandry, (4) home economics, (5) elementary science, (6) biology, (7) farm mechanics, (8) mathematics, (9) Pilipino, (10) agricultural chemistry, and (11) agricultural economics.

The researcher concluded that VAC really had a very good group of college freshmen whose backgrounds fitted very well into the teacher education program.

105. SALCEDO, FELIX N. A Study of the Occupational Distribution and Achievement of the Graduates of the Agricultural Teacher Education Curriculum of the Baybay National Agricultural School, Baybay, Leyte. 1960. Staff Study. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine whether the graduates have been successfully helped in their struggles in life.

Methods. The questionnaire and interview methods were used with 162 graduates from 1954 to 1959.

Findings and Interpretations. About two-thirds of the respondents came from Leyte Province and about one-third from provinces surrounding Leyte. The average age at the time of the survey was 25.56 years. Sixty-three per cent of them have remained single. Twenty-seven per cent have not taken any civil service examination although 75 per cent had participated in competitive examinations.

About 93 per cent, of which 87 per cent were engaged in teaching, were employed. Of those teaching, 78 per cent taught in elementary schools and 77 per cent included agriculture among their teaching subjects. It should be noted that most elementary teachers had to teach a large variety of subjects.

All of the graduates read newspapers. The most widely read metropolitan newspapers were *The Manila Times* and the *Philippines Herald.* The *School News Review* was the most widely read among the non-daily publications. Only 38 per cent were regular subscribers. The respondents had bought 177 professional journals and magazines. The first two preferred were: *Agricultural and Industrial Life* and *Philippine Journal of Education.* A total of 187 professional books of 70 different titles had been bought, with *Tropical Horticulture* by Cevallos, *Understanding the Filipino Child* by Solis and *Poultry Raising* by Fronda, occupying topmost ranks.

The researcher noted that the graduates had brought about remarkable improvements in vegetable gardening, plant propagation, landscape gardening, poultry and swine raising, student discipline, faculty discipline, 4-H Clubs, faculty organizations, scouting, and student organizations. It was concluded that the graduates had fared very well in their careers.

106. SALCEDO, FELIX N. A Study of the Opportunities Seen in Teaching As Well As The Factors Influencing the Decision of Freshmen College Students to Take The Teacher-Education Curricula (BSAED and BSAH) at the Visayas Agricultural College, Baybay, Leyte. Staff Study, 1960. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the reasons why students decided to enroll in a teacher-training institution such as VAC.

Methods. The questionnaire and interview methods were used with 87 college freshmen in the school year 1959-1960.

Findings and Interpretations. Arranged in the order of their rank from highest to lowest, the answers students gave to the question as to why they enrolled in the teacher-education curriculum were as follows:

(1) With a know-how of agriculture, I am not afraid if I should not be employed because I can manage our own or somebody else's farm.
(2) I love children and enjoy teaching them and moulding their character.
(3) I love to work for people.
(4) I would like to uplift my community through my leadership.
(5) Teachers serve as consultants in the community.
(6) Teachers do not notice the passing of time since they always have to race with it in the course of their teaching, and because of such, they do not feel they are growing old.
(7) I shall enjoy doing the daily task of teaching.
(8) I may have the chance to replace those who will retire or pass away.
(9) Teachers are highly esteemed and their job is dignified.
(10) The work of the teacher is regarded as of the greatest significance in life and his influence is always limitless in range and depth.

The first ten opportunities seen in teaching in the order of their rank from the highest to the lowest were the following:

(1) To develop in pupils the attitude that any calling is noble provided it is honest.
(2) To influence youth to live a moral life guided by faith in God and love for fellowmen.
(3) To share with boys and girls the best treasures of life.
(4) To help the individual cultivate the special gifts with which he has ben endowed, and to inspire him to develop them fully following the path of righteousness and justice.
(5) To relieve pain and misery and to aid fellow mortals to realize their best potentialities by helping them gain knowledge and skills in fields of great interest.
(6) To help youth learn certain vocational skills with which they can earn a livelihood in later life.
(7) To give physical, intellectual and moral guidance to youth.
(8) To help children become skilled not only in the 3 R's but also in the 4 H's.
(9) To develop future citizens who are morally upright and who have a high sense of duty.
(10) To help diminish the increasing number of extreme delinquents.

The researcher concluded that the students were influenced primarily by their high sense of duty not only to themselves but to their country and people as well.

107. SALCEDO, FELIX N. A Study of the Other Problems Met by Students Taking the Agricultural Teacher-Education Curriculum in the Visayas Agricultural College, Baybay, Leyte. Staff Study, 1964. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the difficulties met by students in VAC not otherwise covered in the various categories already mentioned with the plan to minimize if not entirely eliminate them for the good of the service.

Method. Two hundred forty-nine students were asked to rank 69 pertinent problems.

Findings and Interpretations The 15 highest ranking problems in the order of their significance were the following:

(1) Inadequacy of newspapers in the library.
(2) High price of goods in the college cooperative store.
(3) Lack of paid janitors, thus leading to the students' cleaning and spending for needed supplies.

(4) Test papers not returned to students.
(5) Inadequacy of fruit and vegetable supply in the college nurseries.
(6) Lack of medical supplies.
(7) Inadequacy of facilities in the dormitories.
(8) Inadequacy of recreational facilities in the college campus.
(9) Lack of post office in the college campus.
(10) Use of worn-out tools in the shop.
(11) Inadequacy of sellers in the cooperative store.
(12) Too long final examinations.
(13) Whistling at girls by some ROTC cadets.
(14) Too expensive projects required.
(15) Lack of place for hanging washed clothes near the boys' dormitory.

The researcher concluded that school administrators should exert considerable and sustained efforts to minimize if not entirely eliminate the difficulties.

108. SALCEDO, FELIX N. A Study of Problems Met by College Students Enrolled in the Visayas Agricultural College, Baybay, Leyte, Relative to Their Instructors. Staff Study, 1968. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the difficulties college students have with their instructors.

Method. Two hundred seventy-six students of freshman, sophomore, junior and senior classifications were asked to check from a list of 106 problems those that they experienced at the Visayas Agricultural College, and to add other problems not included in the list.

Findings and Interpretations. The first 32 problems mentioned by the students in the order of their frequency were:

(1) Not correcting and returning test papers.
(2) Lecturing too fast.
(3) Giving too many requirements.
(4) Dismissing the class too late.
(5) Giving tests without previous notice.
(6) Making embarrassing remarks.
(7) Not returning folders and laboratory exercises.
(8) Giving additional requirements just prior to examination time.
(9) Giving too long assignments.
(10) Not coming on time.
(11) Shouting at students.
(12) Insisting that students bring specimens not found in the community.
(13) Not accepting answers other than those found in the book.
(14) Very difficult to approach.
(15) Not admitting their errors.
(16) Frowning at weak students.
(17) Not checking attendance daily.
(18) Not explaining lessons clearly.
(19) Not repeating question when requested.
(20) Forgetting what they had done.
(21) Being subjective in grading.
(22) Exercising favoritism in giving grades and assignments and in treating students.
(23) Giving no credit for work done.
(24) Voice not loud enough.
(25) Scolding class the whole period even if only one is at fault.
(26) Making faulty decisions.
(27) Not summarizing the lesson.
(28) Giving no encouragement.
(29) Not reading grades in the class as required.
(30) Backbiting students.
(31) Not punishing those deserving to be punished.
(32) Using visual aids sparingly.

The researcher concluded that instructors should work to make situations in the college campus not only wholesome but also normal. School administrators should remind their instructors from time to time to improve their ways of teaching and dealing with students.

109. SALCEDO, FELIX N. A Study of the Problems Met by Students Taking the Agricultural Homemaking Teacher Education Curriculum in the Visayas Agricultural College, Baybay, Leyte, Relative to Other Problems. Staff Study, 1964. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the problems students have included in the different categories already reported for more effective guidance work on the part of all concerned.

Method. A list of 69 problems was administered to 319 students.

Findings and Interpretations. The first twenty problems mentioned by students in the order of their occurrence from the highest to the lowest were:

(1) High price of goods sold at the VAC Store.
(2) Inadequate newspapers in the library.
(3) Inadequate supply of fruits and vegetables in the college nursery and farm.
(4) No janitorial service, hence students need to do the cleaning and at the same time purchase the supplies needed.
(5) Some instructors do not return test papers to students.
(6) Not enough storekeepers in the VAC Store.
(7) Very inadequate facilities for recreation.
(8) Too long final tests.
(9) Inadequate snacks in the cafeteria.
(10) Very expensive snacks in the cafeteria.
(11) Inadequate living quarters.
(12) Inadequate comfort rooms.
(13) No post office in the school.
(14) Posting names of students with failing grades.
(15) No shine shoe boys on the campus.
(16) Dormitory matrons sometimes not very understanding.
(17) Inadequate references not only in quality but also in quantity.
(18) Inadequate garden tools not only in kind but also in number.
(19) Inadequate lighting not only in intensity but also in duration.
(20) Lack of chairs, benches and tables in the dormitories and cottages.

The researcher concluded that school administrators should know very well these problems and that steps should be taken to remedy or counteract the same.

110. SALCEDO, FELIX N. A Study of the Problems Met by Students Taking the Agricultural Homemaking Teacher Education Curriculum in the Visayas Agricultural College, Baybay, Leyte, Relative to Other Students. Staff Study, 1963. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the problems students have in relation with other students in the same college.

Method. A list of 183 problems was administered to 319 students.

Findings and Interpretations. The first 20 problems mentioned by the students in the order of their occurrence were as follows:

(1) Some classmates are individualistic.
(2) Some classmates cannot work without the teacher watching them.
(3) Walking with boy friends or girl friends is often misunderstood by most students.
(4) The student body of both high school and college departments do not cooperate with each other.
(5) Some students are very noisy during convocations.
(6) Some students do not sing the national anthem during flag ceremony nor do they recite the patriotic pledge together with the rest.

(7) Some students do not practice good manners and right conduct.
(8) The CSBO is not functioning as it should.
(9) Some use slippers when they go to school.
(10) Some students are noisy in the library.
(11) Some are noisy in the cottages and dormitories even during study periods.
(12) Some do not study their lessons.
(13) Some monopolize students' opportunities for leadership.
(14) Some monopolize acting in programs.
(15) Some students annoy others by their boastfulness.
(16) Many students are not cooperative in their attitudes.
(17) Some take things in an easy-go-lucky manner to the discomfort of fellow students.
(18) Some lost things are not returned.
(19) Some students are very discourteous.

The researcher concluded that steps should be taken by school administrators to counteract, minimize if not entirely eliminate the difficulties. The guidance service of the school should be improved.

111. SALCEDO, FELIX N. A Study of the Problems Met by Students Taking the Agricultural Homemaking Teacher Education Curriculum in the Visayas Agricultural College, Baybay, Leyte, Relative to Student Teaching. Staff Study, 1963. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the difficulties met by student teachers in both on-and off-campus student teaching.

Method. A list of 42 problems was given to 34 seniors who had gone through student teaching for ranking.

Findings and Interpretations. The first 20 problems mentioned by students, in the order of their rank from the highest to the lowest, follow:

(1) Difficulty of pleasing or satisfying everybody in the campus.
(2) Difficulty of securing visual aids.
(3) Pupils not studying their lessons.
(4) Below standard classrooms.
(5) Pupils' irregular attendance in classes.
(6) Habitual tardiness of many pupils.
(7) Pupils not submitting requirements on time.
(8) Unfairness of some cooperating teachers in giving grades.
(9) Being asked to teach without the benefit of adequate observation.
(10) Some parents of pupils are not making good on their promises.
(11) Pupils not securing materials needed for lessons assigned.
(12) Lack of adequate buildings.
(13) Inadequate water supply.
(14) Absence of cooperating teachers during classes.
(15) Lack of ideal projects for field trip purposes and in the school itself.
(16) Cooperating teachers come to classes very late.
(17) Cooperating teachers not well selected and trained.
(18) Cooperating teachers who nag.
(19) Habitual absence of many students.
(20) Garden sites not suited for gardening.
(21) Parents reluctant to attend meetings called by the school.

The researcher concluded that cooperative schools should be selected carefully and that there is a need for a workshop for cooperating teachers as well as cooperating school administrators.

112. SALCEDO, FELIX N. A Study of the Problems Met by Students Taking the Agricultural Teacher-Education Curriculum in the Visayas Agricultural College, Baybay, Leyte, Relative to Other Students. Staff Study, 1964. Library,

Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the difficulties students have with reference to fellow students in order to serve as a basis for improving student to student relations.

Method. A list of 183 problems was administered to 249 students for ranking purposes.

Findings and Interpretations. The 20 most frequent problems, arranged in descending order, were:

(1) Some lost things are not returned.
(2) Some students cannot be understood.
(3) Some students borrow money and do not pay it back.
(4) Some students have no self-discipline.
(5) Students are too noisy during convocations.
(6) Some cause disturbances by reporting to class and flag ceremony late.
(7) Some students cannot work without the instructor watching them.
(8) Some students are noisy in the library.
(9) Many students do not follow rules and regulations of the school thus causing trouble not only to themselves but also to others.
(10) Students get tired listening to long announcements after flag ceremony and cause disturbance in the line.
(11) Some are individualistic.
(12) The sleeping of some students in class contaminates others.
(13) Some do not treat fellow students well.
(14) There is too much noise sometimes in the dormitories and cottages.
(15) Some do not cooperate in performing needed work.
(16) Some students are discourteous to others.
(17) Some students are reluctant to contribute to good causes.
(18) Some are dependent upon others for homework and other assigned work.
(19) Students in both high school and college departments do not cooperate with each other.
(20) The CSBO is not functioning well.

The researcher concluded that adequate efforts should be exerted to improve the guidance services of the school.

113. SALCEDO, FELIX N. A Study of the Problems Met by the Students Taking the Agricultural Teacher-Education Curriculum Leading to the Degree of Bachelor of Science in Agricultural Education in the Visayas Agricultural College, Baybay, Leyte, Relative to Student Teaching. Staff Study, 1963. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the difficulties met by students in the different schools in which they were assigned for student teaching.

Method. A list of 42 significant and pertinent problems relative to student teaching was given to 47 seniors for ranking purposes.

Findings and Interpretations. Arranged in the order of their importance from the highest to the lowest, the first 20 problems met by student teachers were:

(1) Pupils are very irregular in attendance.
(2) Pupils do not study their lessons.
(3) Some parents allow their children to absent themselves from classes.
(4) It is difficult to secure visual aids.
(5) It is hard to satisfy everybody.
(6) Homes have no sanitary toilets.
(7) Cooperating teacher take advantage of the student teacher.
(8) Some students are disloyal.

(9) Classrooms have inadequate equipment, chairs, and tables.
(10) Students are lazy.
(11) Some cooperating teachers are not well-qualified to serve as such.
(12) Some cooperating teachers report to their classes too late and leave too early.
(13) There is inadequate water supply for garden work.
(14) Tools for gardening are inadequate.
(15) Area for garden purposes is inadequate.
(16) Boarding houses are hard to find.
(17) Student teachers are assigned too many subjects.
(18) Pupils do not bring assigned materials to class.
(19) Classrooms are not conducive to good teaching and learning.
(20) Some people in the community are not cooperating with the school.

The researcher concluded that efforts should be exerted to overcome as many of the problems as possible by holding a workshop for cooperating teachers, vocational heads and school administrators.

114. SALCEDO, FELIX N. A Study of What College Students in the Visayas Agricultural College Think of Their Instructors Relative to Instructional Skills. Staff Study, 1964. Library, Visayas Agricultural College, Baybay, Leyte.

Purpose. To determine the weaknesses of VAC instructors in connection with teaching and learning processes.

Method. A rating scale consisting of a set of twenty instructional skills with five possible chances on the scale was administered to 240 college students composed of 76 freshmen, 35 sophomores, 41 juniors, and 88 seniors or 76% of the entire student body. Twenty-three instructors were rated.

Findings and Interpretations. Generally speaking, freshmen, sophomores, juniors, and seniors rated their instructors similarly, that is, with average scores of 76.9%, 77.3%, 77.7% and 76.4% respectively.

Based upon student ratings, the 20 instructional skills included in this study ranked as follows:

(1) Sense of humor.
(2) Sense of proportion.
(3) Enunciation.
(4) Preparation for class meetings.
(5) Ability to arouse interest.
(6) Organization of the course.
(7) Quality of thinking demanded of students.
(8) Fairness in grading.
(9) Rapport with students.
(10) Scholarship.
(11) Control of cheating during examinations.
(12) Self-confidence.
(13) Tolerance and liberality.
(14) General estimate of instructors as teachers.
(15) Ability to express oneself.
(16) Punctuality in meeting classes.
(17) Absence of personal peculiarities.
(18) Interest and enthusiasm and assignments.

No one coun'ed *personal appearance* against any instructor.

The researcher concluded that the results should be made known to the instructors and proper steps be taken by all concerned to minimize if not entirely eliminate the difficulties. Individual as well as group conferences will no doubt help a great deal.

115. SALCEDO, RODOLFO N. A Comparative Study of the In-School and Out-of-School Supervised Farming Programs in Ten Selected Agricultural Schools in the Philippines. Thesis, M.S., 1962, University of the Philippines. 174 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes. To determine: (1) the practices and achievements of students who undertook in-school or out-of-school supervised farming programs; and (2) the problems met by in-school and out-of-school supervised farming teachers.

Method: Separate questionnaires were mailed to 420 students and 66 teachers, of whom 80 per cent and 70 per cent respectively responded.

Findings and Interpretations. Some of the important findings were the following:

(1) Most of the in-school supervised farmers were required to undergo supervised farming, while the majority of the out-of-school supervised farmers volunteered.

(2) Majority of the in-school supervised farmers conducted their supervised farming program with their classmates while the out-of-school supervised farmers conducted their program with parents or relatives.

(3) In-school supervised farmers raised crops while out-of-school supervised farmers raised animals.

(4) Out-of-school supervised farmers had bigger projects than the in-school ones.

(5) In-school supervised farmers were dependent on the school while out-of-school supervised farmers depended on their parents and relatives.

(6) The in-school group had more improvement projects and supplementary farm practices than the out-of-school group.

(7) In-school supervised farmers were visited more often than out-of-school supervised farmers.

(8) Out-of-school supervised farmers acquired more resources in terms of tools and equipment, animals, and crops as compared to the in-school ones. However, the in-school supervised farmer learned more skills as compared with the out-of-school supervised farmers.

Similarities in both categories of supervised farming programs were: the easy accessibility to farms; no payments made on production factors, such as land; existence of goals and keeping of records; absence of written agreements; the parents of both groups were the parties most involved in handling money matters; the supervised farming programs of both groups were evaluated; favorable attitudes of both groups towards supervised farming programs.

The problems met by both groups of supervised farming program teachers were generally the same.

116. SAMSON, MARCELINO V. and ALONZO, ERIBERTO C. The Social and Economic Conditions of Adult Farmers in Kabacan, Cotabato. Senior Problem, 1968, Mindanao Institute of Technology. 75 p. Library, MIT, Kabacan, Cotabato.

Purpose. To gather data on farmers' socio-economic conditions which are vital in the formulation of a comprehensive program planning.

Method. Personal interviews were conducted with 200 adult farmers in four experimental barrios under MIT-UNESCO study.

Findings and Interpretations. The typical farmer in the barrios of Bannawag, Malanduague, Pisan and Upper Paatan had an average family size of 6.44 persons. The oldest farmer was 76 years old and the yougest 22, with an average age of 43.04 years for all 200 farmers. Of the 200 respondents, 63.5 per cent were owner-operators, 14.5 per cent were part-owners while 22 per cent were tenants. Nine per cent of the farmers had no schooling at all, about 40 per cent reached the primary grades, 31 per cent reached elementary school and 15 per cent reached high school. The

owner-operators had the highest number of years in school, while the tenants had the lowest. The average educational attainment of all farmers was 4.54 years. Twenty-three and seventy-nine hundredths per cent of the farmers' dependents with age ranging from seven to 14 were out of school, and 71.98 per cent of the dependents who were 15 years old and above were out of school. Seventy-six per cent of the farmers were homeowners, that is, owning the homes as well as the land on which they lived. Another 16.5 per cent also owned their homes, but not the lots where their homes stand. Thirty-one and one-half per cent of the houses were made of round wood posts, lumber siding and cogon roof, while about 29.5 per cent were made of concrete, lumber, and G.I. sheets. Owner-operators owned three-fourths of these more substantial homes. The most common type of toilet was the open pit, although five farmers had water-sealed toilets. Seventy-three and five-tenths per cent of the farmers got their household water from pitcher pumps or privately drilled wells, while 16 per cent used open wells. Artesian wells and springs were used by the others. One hundred ninety-seven farmers had open drainage for disposing of their water-waste, while only three had blind drainage. More than half of the farmers disposed of their garbage by burning, about 14 per cent made it into compost, six and five-tenths per cent dumped their garbage anywhere, and 25 per cent dumped them in dugged pits. Seventy-four and five-tenths per cent of the farm houses were not fenced. The most common source of farm information about crops, livestock or farm products was the municipal agriculturist, while that for health and sanitation information was the Rural Health Unit. The most common reading matter was *Bannawag*, an Ilocano magazine, followed by the *Philippines Free Press* and *Liwayway*. Sixty per cent of the farmers were members of the PTA, seven, of the FACOMA, 16 of the Farmers Association and 24 were members of the Irrigators Association. The most important problems of the farmers were rat infestation, poor roads and bridges, low agricultural production, peace and order, and inadequate school buildings in the elementry schools.

117. SANTOS, BRUNO M. A Critical Analysis of the In-Service Training Needs and Participation in In-Service Training Programs by Teachers of Agricultural Schools of the Philippines. Thesis, Ed.D. 1961, Michigan State University. 214 p. Library, Michigan State University, East Lansing.

Purpose. To determine the in-service training needs, and scope and participation by teachers of agricultural schools of the Philippines in in-service training programs.

Method. Data were obtained by means of questionnaires sent to teachers of 25 agricultural schools, administrators of 32 agricultural schools, and seven teacher-training institutions.

Findings and Interpretations. Out of 27 items of need listed in the questionnaires, the teachers rated 20 as critical with scale points of 3.0 or higher on a five-point scale. The range of needs was 15 to 24. Language teachers expressed the most and social science teachers the least number of needs. Grouped into areas and priority the needs were:

(1) Research and experiments.
(2) Subject matter content.
(3) Methods.
(4) Co-curricular activities.
(5) General education.
(6) Administration and supervision.

All areas were given scale points higher than 3.0, the midpoint on the scale.

Administrators and teachers were agreed as to the latter's need for in-service training. However, they disagreed on the priority of these needs.

The administrators expressed the need for in-service training in all the items listed in the questionnaire. The areas of needs were: administration, supervision, curriculum, guidance, and public relations.

Workshops, conferences, and demonstrations were the techniques commonly used in in-service programs.

Fewer than three teachers per school participated in one or more in-service training programs each year. Among the respondent teachers only two attended per year per school.

The teachers' and administrators' participation in in-service programs was directly related to years of tenure up to 15 and 20 years, respectively, and inversely related thereafter. The number of in-service programs conducted by administrators was directly related to their participation in regional and national in-service training activities.

Limited opportunity, lack of funds, subject not in interest field, and family responsibilities were the reasons for the teachers' limited participation in in-service training activities. "Too busy with administrative duties" was the most important reason which limited the number of local in-service programs conducted by administrators.

In-service programs held in the past were judged as generally effective but inadequate and limited in scope.

Teacher-training institutions expressed willingness to cooperate with and assist the Bureau of Public Schools in providing in-service training activities for teachers.

Time, finance, and certain regulations appear to be the major sources of impediments limiting the number and frequency of in-service training activities provided and the participation by teachers in these programs.

118. SANTOS, SEVERINO R., JR. Financing Supervised Farming Programs of Vocational Agriculture Students in the Philippines. Thesis, M.S., 1959, Cornell University. 100 p. Library, Cornell University, Ithaca.

Purpose. To determine how the schools, teachers, parents, and other individuals and agencies helped students with outstanding supervised farming programs to finance their farming activities.

Method. Agricultural schools which had outstanding supervised farming programs were selected with the assistance of the Chief of the Agricultural Education Division of the Bureau of Public Schools. Selection was based on the opinions of five of his agricultural education supervisors, all of whom had knowledge of the conditions in the different agricultural schools all over the country. Each supervisor was asked to rank separately the different schools in each of the main regions of the Philippines — Luzon, Visayas and Mindanao — according to their success in implementing supervised farming programs. Five schools with two alternates were finally selected in Luzon, two with two alternates in Mindanao, and two with two alternates in the Visayas.

Four sets of interview schedules were developed, one for the vocational agriculture teachers of the students and another for the parents of the students. Two schedules were prepared for the students, one for those who engaged in crop farming and the other for those in livestock production. The schedules were designed to collect data necessary to write case studies of the supervised farming programs of each student.

Findings and Interpretations. Of the 34 students, 20 were financed either partially or fully by schools; 16 by parents; three by relatives; two each by the boys themselves, by farmers, and by feed dealers; and one each by a friend, a teacher and a rural bank.

The vocational agriculture teachers helped students finance their supervised farming programs by assisting them in obtaining resources from their respective schools. In addition, at the time the students were planning

for financing, the teachers helped in determining the kind and amount of resources needed, providing information on the possible sources of finance, making farming program budgets, developing financial agreements, contracting possible sources of financing and in convincing parents to help finance the farming programs of their sons. The parents and other individuals and agencies, on the other hand, helped mainly by providing a part or all of the resources the students needed in their supervised farming programs.

119. SONZA, LILIA L. A Follow-up Study of the Graduates of the Iloilo National Agricultural School Covering the Period 1960-1964. Thesis, B.S., 1968, Iloilo National College of Agriculture. 35 p. Library, Iloilo National College of Agriculture, Lambunao, Iloilo.

Purposes. To determine: (1) the kinds of districts from which the graduates were drawn; (2) the occupational groups to which their parents belonged; (3) their occupational placement; (4) their income after leaving school; and (5) the problems they had in their jobs.

Method. Questionnaires were sent to the graduates of 1960 to 1964. Only 200 graduates or 64.30 per cent responded.

Findings and Interpretations.

(1) One hundred twenty-one or 60.50 per cent of the respondents were reared in farming communities; 49 or 24.50 per cent grew up in poblacions; 15 or 7.50 per cent came from farming-fishing communities; eight or four per cent were from fishing districts and seven or 3.5 per cent were brought up in urban communities.

(2) The occupational groups of parents were: farmers, 67.5 per cent; government employees, 4.5 per cent, businessmen, 0.4 per cent; others, 16.00 per cent.

(3) Of 200 graduates included in the study, 31 or 15.5 per cent were doing actual farming work, 33 or 16.5 per cent were employed in jobs related to agriculture or homemaking, 36 or 18 per cent were employed in jobs not related to either agriculture or homemaking, 72 or 36 per cent of the graduates were pursuing further studies, and 28 or 14 per cent were jobless.

(4) The average annual income of those in farming jobs and those in jobs not related to either agriculture or homemaking was ₱1,521.05 and ₱1,520.66 respectively.

(5) Only one of the employed graduates revealed that he had a problem pertaining to his job — its instability.

120. SOOKASEM, CHARON. Agricultural Subject Matter Needs in the Work Education Program. Thesis, M.S., 1962, University of the Philippines. 271 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes.

(1) To determine what agricultural enterprises should be included in the work education program of elementary schools.

(2) To find out the subject matter needs of teachers.

(3) To discover the problems of teachers of work education in agriculture.

(4) To find out the teachers' attitude towards the work education program in agriculture.

Method. Questionnaires were sent to 558 teachers of whom 550 or 98.56 per cent responded.

Findings and Interpretations. Arranged according to rank, the following were the important enterprises

which teachers thought should be taught in each grade.

Grade I: Camote, papaya, chicken, sitao, patola, eggplant, cassava, tomato, peanut, banana.

Grade II: Papaya, camote, chicken, sitao, cassava, eggplant, patola, tomato, peanut, banana.

Grade III: Camote, papaya, chicken, eggplant, peanut, banana, sitao, cassava, tomato, patola.

Grade IV: Papaya, chicken, camote, eggplant, peanut, sitao, banana, cassava, pechay, lettuce, tomato.

Grade V: Eggplant, chicken, pechay, camote, lettuce, cassava, papaya, swine, sitao, landscaping.

Grade VI: Eggplant, chicken, camote, pechay, papaya, landscaping, lettuce, swine, corn, peanut.

The subject matter needs of teachers were in the following enterprises: vegetable, field crop, fruit, animal, and landscape gardening.

The problems of teaching elementary agriculture in elementary schools were:

(1) Inadequacy of implements and tools in the school and homes.
(2) Inadequacy of books, journals and other references dealing with vocational agriculture.
(3) Lack of interest in the phase of the curriculum by the school administrator.
(4) Inadequacy of supervision from the central office.

The teachers' attitude towards the work education program was as a whole favorable. The majority of them felt, however, that their preparation and training to teach this subject was inadequate. They feel that work education should be taught as early as in Grade I. Apparently their background characteristics were not associated with their attitude towards the work education program. However, the teachers who taught in barrio schools and those who had gone through in-service training were more inclined to believe that the work education program was very satisfactory and worthwhile.

121. SUAREZ, BIENVENIDO G. Agricultural Education in Grade V (A Case Study). Thesis, M.A., 1967, Central Philippine University. 252 p. Library, CPU, Iloilo City, Iloilo.

Purpose. To investigate the status of elementary agriculture in Iloilo City, and to offer suggestions where needed.

Method. Using the normative survey method, data were obtained from 26 elementary agriculture teachers, 21 school administrators, and 1,590 pupils of the 21 complete elementary schools of the Division of Iloilo City.

Findings and Interpretations. The study revealed that most of the teachers were not professionally prepared to teach agriculture and that only one in-service class for teachers, administrators, and supervisors had been held in the last five years. Many of the teachers have had farm training and experience and were also engaged in the teaching of other subjects. None of the teachers subscribed to professional magazines, none was a member of an organization which promotes agricultural education, and none of them had written any article on agriculture. Many of the teachers participated in community activities, many were interested in teaching agriculture, and many were also acquainted with all the agricultural agencies of the government.

Many of the administrators and supervisors were new in their present position, had no experience as teachers of agriculture, and were academically prepared. The available teaching materials were inadequate. Most of the schools were rated "poor" in the provision of visual aids, textbooks, tools, and other instructional devices. Many of the schools were also rated "poor" in the provision of nursery, garden house, storage facilities and classrooms. Many of the pupils failed to adopt approved practices in their home gardens, such as determining the percentage of seed germination, using

insecticides and fertilizer, raising seedlings in seed boxes, selecting seeds and keeping a garden record book. Many of the teachers believed that the 80-minute period should be devoted to the teaching of elementary agriculture.

122. SUMAYAO, BLANDA R. A Study of the Guidance Needs and Problems of the Camarines Sur National Agricultural School College Students. Senior Study, 1964. 40 p. Camarines Sur National Agricultural School, Pili, Camarines Sur.

Purposes. The purposes of the study were: to determine the guidance needs and problems of the Camarines Sur National Agricultural School college students, more specifically, their mental health problems, home and family problems, school problems, boy-girl relationship problems, and problems with regard to association with others; and to see how those problems compare between the different years in order that they may be used as the basis for guidance services of the school.

Method. One hundred ninety-four students were given questionnaires which were accomplished by 180 students made up of 50, 33, 58 and 39 first, second, third and fourth year students, respectively.

Findings and Interpretations. The most significant problem of the students was their worry about financial conditions of the family. This was the only problem found to have surpassed the 50 per cent mark. The other significant problems were: sensitivity, lack of references, worry about low grades, teachers play favorites, too much homework, and fear of close contact with the opposite sex.

The following recommendations were made:

(1) The school should offer scholarships to poor and deserving students.
(2) Financial aid should be extended to students by making them work on a paid labor basis or by increasing the number of student assistants presently employed.
(3) Teachers should give students a normal amount of affection and security.
(4) The school should increase reference materials to meet the needs of the students.
(5) Teachers should always play fair.
(6) The school should make it clear to the students that it will not tolerate immoral behavior.

123. SUMAYAO, BLANDA RELENTE. The Influence of the Camarines Norte National Agricultural School (CNNAS) on the Agricultural Practices, Particularly Rice Culture, in Three Rice-Growing Barrios of Camarines Norte. Thesis, M.S., 1968, University of the Philippines College of Agriculture. 93 p. Library, U. P. College of Agriculture, College, Laguna.

Purposes.

(1) To discover the benefits that farmers in the vicinity of the CNNAS derive from the school.
(2) To identify the improved rice farming practices, the sources of seeds and other farming materials, and the sources of information of the farmers.
(3) To discover if any relation exists among the adoption of improved practices and the factors of farmers' children studying in the school, proximity to the school, attendance in adult classes, and presence of CNNAS students in the barrio.

Method. A total of 105 farmers residing in three barrios of varying directions and distances from the CNNAS were personally interviewed.

Findings and Interpretations. Very few (13 per cent) took advantage of

their agricultural school by sending their children to it. Most of those who visited the CNNAS were Talubatib farmers. The largest percentage of farmers who referred their farming problems to the CNNAS also came from Talubatib, the site of the school. The adult classes were not popular even among the Talubatib farmers. Only 24 farmers (23 per cent of the sample) were aware of these classes. Of the 24 farmers, only five attended classes. CNNAS students rendered only little benefit to the farmers. The farmers mentioned the following benefits:

(1) Farmers imitated on their farms what students were doing.
(2) Students introduced to them the "dapog" method, masagana system, caponizing, and caring for animals.

Six sources from which farmers learned about the practices they followed, according to frequency of mention, were:

(1) Other farmers.
(2) Extension workers.
(3) Parents.
(4) The CNNAS.
(5) Mass media.
(6) Chemical dealers.

Two practices, the use of rotary weeders and the "dapog" seedbed, were positively related to farmers' having children at the CNNAS and teacher's visit to the farmers.

124. SUWATMEKIN, THONGCHAI. An Analysis of the Problems Encountered by Beginning Vocational Agriculture Teachers During Their First Year of Teaching in the Secondary Agricultural Schools in the Philippines. Thesis, M.S., 1967, Central Luzon State University. 103 p. Library, Central Luzon State University, Muñoz, Nueva Ecija.

Purpose. To determine the problems encountered by beginning vocational agriculture teachers during their first year of teaching in the secondary agricultural school in the Philippines.

Methods. Survey questionnaires and personal interviews were conducted with 74 beginning vocational agriculture teachers in the different types of secondary agricultural schools in the Philippines.

Findings and Interpretations. The average age of the teachers in their first year of service was 27.5 years. The majority (93.2 per cent) were males. Approximately one-half of both sexes were single. Nearly 80 per cent were BSA and BSAE degree holders. The beginning teachers taught agricultural, related, or science subjects and supervised projects in agriculture. Twenty per cent of the beginning vocational agriculture teachers were not fully certified to teach.

Acquisition of school equipment and materials posed the greatest difficulty for beginning vocational agriculture teachers. Other problems were keeping up with correspondence, developing publicity materials, and planning and preparing teaching aids and materials.

To solve or minimize such difficulties, school administrators should submit to the teacher education institutions through the Bureau of Vocational Education the special qualifications of teachers desired. School officials should attempt to overcome deficiencies in school equipment, physical condition, textbooks, references, instructional materials, teaching devices, and teaching aids.

125. TANGCHAI, THIRAPONG. The Scholastic Performance of College Students Enrolled at Kasetsart University, College of Agriculture During the School Years 1954 and 1955. Thesis. M.S., 1962, University of the Philippines. 47 p. Library, U. P. College of Agriculture.

Purposes. (1) To determine the scholastic performance of college students from different types of high schools in

Thailand; (2) to determine factors associated with various levels of academic performance in the first two years in college; (3) to determine the relationships between grades in certain first-year subjects and related second-year subjects; (4) to compare the scholastic performance of students who dropped out and those who continued studying, and (5) to find out the reasons for students' dropping out.

Methods. Data for this study were gathered from the first- and second-year academic records of 147 students who enrolled as freshmen in the College of Agriculture, Kasetsart University, Bangkok, Thailand.

Findings and Interpretations.

(1) The students from the five different types of high schools studied did not differ in their scholastic performance during the first year.
(2) During the first year in college, none of the five factors investigated was found to have a significant relationship to scholastic performance. For the second year, type of high school, place of residence, age, and sex were found to be related to academic performance. Higher levels of scholastic performance were exhibited by graduates of teacher-training schools, town-reared students, younger-than-the-average students, and females.
(3) The relationship between grades in Chemistry 101 and Chemistry 201, Zoology 101 and Zoology 201, and first-year and second-year average grades was quite high and seems to have some value for predicting performance.
(4) Among the reasons given for dropping out of college were: transfer to other faculties, search for employment, misbehavior, and poor scholastic standing.
(5) Those who dropped out obtained a lower average grade than those who continued studying.

126. TIBAY, MATEO R. A Study on the Use of School Farms in the Program of Vocational Agriculture Education in Selected Schools in the Philippines and in the United States. A Report, M.S., 1959, Oklahoma State University. 99 p. Department of Agricultural Education, Oklahoma State University, Stillwater, Oklahoma, U.S.A.

Purpose. To secure information on the use of school farms in vocational agricultural education in the Philippines and the United States.

Method. Questionnaires were used to collect data from 17 Philippine agricultural schools and five selected United States high schools which had school farms.

Findings and Intepretations. In the Philippines and in the United States school farms were generally used for the following purposes:

(1) To teach students approved farming under practical farm conditions.
(2) To provide students desirable laboratory experiences.
(3) To demonstrate approved farming practices.
(4) To serve as a source of income for needy students.
(5) To conduct research or other experimental work (Philippine school farms are utilized more for experimental purposes than are those in the United States).

The total area of each school ranged from 14 to 2,078 hectares, and varied according to the type of agricultural school. School farms were generally smaller in rural high schools than in national agricultural schools. The area devoted to class projects ranged from four to 300 hectares.

Only one cooperating school in the United States had very much land. This was the Chilocco Indian School with an area of 8,640 acres (approximately 3,456 hectares). The area of other cooperating schools ranged from

20 to 160 acres (about eight to 64 hectares).

Rice and corn were widely grown on school farms of most Philippine agricultural schools. Coconut, tobacco, abaca, sugarcane and various minor farm crops, vegetables and fruit trees, etc. were also grown depending on their adaptability to the locality. Poultry, swine and other livestock raising were common to most schools.

On the average, a student could cultivate half of a hectare during the year.

It was recommended that the effectiveness of the use of school farms as a means of vocational instruction be studied further.

127. TINGZON, WILFREDO P. A Follow-up Story of the Graduates of the Iloilo National Agricultural School Covering the Period 1955-1959. Thesis, B.S., 1967, Iloilo National College of Agriculture. 26 p. Library, Iloilo National College of Agriculture, Lambunao, Iloilo.

Purposes. To determine: (1) the nature of the jobs presently engaged in by the graduates covering the period 1955 to 1959; (2) the number of graduates holding jobs not related to agriculture; and (3) the problems the graduates had in their jobs.

Method. Questionnaires were mailed to INAS graduates from 1955 to 1959, of whom 57.5 per cent responded.

Findings and Interpretations.

(1) Sixty-one or 31.63 per cent were doing actual farming work; 60 or 31.08 per cent held jobs related to agriculture; 44 or 22.9 per cent were in jobs not related to agriculture; 24 or 12.43 per cent were pursuing further studies; and four or 2.07 per cent were doing housekeeping work.

(2) Of the 44 graduates who landed jobs not related to agriculture, 22 claimed that there were no farming jobs available for them after graduation. Other reasons given were the lack of farms to till and deeper interest in clerical work, teaching, army work, business and carpentry than in farming.

(3) Only 40 of the 165 employed graduates cited their problems in their present jobs, among them: lack of educational qualifications, capital and facilities to do the assigned work, poorness of public relations, inadequacy of salary, riskiness of the job and slowness of promotions.

(4) Graduates engaged in agricultural jobs had an average income of ₱2,110; those in non-agricultural jobs earned ₱1,678.

128. VERACRUZ, FLORIDA A. A Study of the Curriculum Problems of the Bachelor of Science in Agricultural Education Students. Senior Study, 1964, 40 p. Camarines Sur National Agricultural School, Pili, Camarines Sur.

Purpose. The purposes of the study were: (1) to find out the subjects graduates teach in the elementary schools; (2) to find out the grade levels taught by graduates; (3) to find out the classroom management problems graduates meet in their teaching; and (4) to determine the importance of each of the subjects in the elementary agriculture and industrial arts curricula.

Method. Questionnaires were distributed to student-teachers and their cooperating teachers. Of the 30 student teachers and teachers who were contacted, only 20 (66.6 per cent) returned the questionnaires.

Findings and Interpretations.

(1) The graduates taught in the different grade levels in the elementary school but mostly in grades V and VI, where ele-

mentary gardening and industrial arts were offered, respectively.

(2) All the graduates taught elementary agriculture and industrial arts as well as related subjects, such as music, Pilipino, social studies, arithmetic, health and science, language arts, work education, arts and physical education, and vernacular.

(3) Graduates found difficulties in methods of teaching, especially in the subjects in which they did not receive any training such as music, art education, and social studies, in participation in extra-curricular activities, in accomplishment of BPS forms and in maintaining school discipline.

(4) Not all the subjects included in the curriculum were found to be useful by the graduates like Spanish, Farm Shop Practice I, Farm Machinery and Motors, Student Teaching, Seminar in Agricultural Engineering, and Physics I and II.

The following recommendations were submitted: (1) that student teachers should teach only their major subjects such as elementary agriculture, industrial arts, and work education, and only in Grades V and VI, where elementary agriculture and industrial arts are respectively offered; (2) that the following be given emphasis in the curriculum for elementary agriculture and industrial arts majors: music, art education, reading and language arts, discipline, accomplishment of forms, and extra-curricular activities; (3) that the following subjects be offered in the curriculum to increase the proficiency of the students majoring in elementary agriculture and industrial arts: Agronomy 5 and 8, Soil Science and Fertilizers, Animal Husbandry, Research Work, Elementary Methods and Principles of Teaching, Sociology, Child Psychology, Pilipino, Music and Arts, and Physical Education; (5) that Spanish subjects in the curriculum be substituted with more relevant ones such as Agronomy, Music and Pilipino; and (6) that the four-year curriculum for the Bachelor of Science in Agricultural Education, major in Elementary Agriculture and Industrial Arts be changed to a five-year curriculum.

129. YUAN, PEI. A Study of the Development and Direction of Agricultural Education in Taiwan. Thesis, M.A., 1967, Central Philippine University. 159 p. Library, Central Philippine University, Iloilo City, Iloilo.

Purpose. To explore the progress of agricultural education in Taiwan from the nineteenth to the twentieth century.

Method. Historical documents were reviewed and personal interviews conducted. Information was also collected from the Institute of Modern History, the Department of Education, and agricultural colleges and vocational schools.

Findings and Interpretations.

(1) Two historical factors influenced the development of agricultural vocational education in Taiwan: the progress of agricultural education in China and the educational policy of Japanese colonialism.

(2) The educational system and the administrative organization within Taiwan schools have preserved many traditional features but have undergone numerous revisions. The administrative organization follows the rule of centralization.

(3) Multiple laws and regulations limited the curriculum offerings of agricultural schools.

(4) Taiwan agricultural schools use four instructional methods; *lecture, leading question, project,* and *self-guidance.* Farm practices used in agricultural education were extra-curricular prac-

tice, general practice, practice on the home farm, and practice between terms.

(5) Teacher-training programs for agricultural schools were of two kinds: the preparatory teachers' training and the teachers' re-education or in-service training.

(6) The adult farmer training program was an extra responsibility of the agricultural school.

(7) Agricultural education existed only in secondary and post-secondary schools. There were no agricultural programs in the elementary schools.

(8) The principal objective of agricultural education was to develop and enrich rural life by acquainting future farmers with modern farming methods and better agricultural techniques.

The findings of this study may be of value to personnel in private and government agencies and educators interested in agricultural education in Taiwan.

130. ZALAMEDA, RODRIGO R. A Study of the Educational Attainment, Service Status, and In-Service Training Needs of Applied Science Teachers in the Secondary Agricultural Schools in the Philippines. Thesis, M.S.Ag.Ed., Araneta University Foundation. Library, Araneta University Foundation, Victoneta Park, Malabon, Rizal.

Purpose. To determine the educational attainment of applied science teachers, the degree to which they meet the civil service requirements for their position, their service status, the kind of in-service training they have received, the areas of science teaching they considered important, their felt needs for in-service training in science teaching and the possibilities by which applied science programs in the different agricultural schools may be improved.

Method. Two hundred applied science teachers from 79 secondary agricultural schools under the direct administration and supervision of the Bureau of Voca'ional Education in 1966 were the subjects of this study. Data were collected through mailed questionnaires.

Findings and Interpretations. All applied science teachers held baccalaureate degrees; the majority (66 per cent) were graduates of the different disciplines of agriculture. One hundred fifty-six or 78 per cent possessed adequate knowledge of their subject matter due to its having been a major or a minor field, or due to the teachers' having taken at least 15 units of the subjects taught. One hundred seventy-eight or 89 per cent were professionally trained to teach because they were either education graduates or had taken 18 or more units in professional education.

Only 95 or 47.5 per cent of the respondents possessed adequate civil service eligibility and therefore classified permanent. A number of the non-eligibles indicated that they had taken the Teacher's Examination given by the Civil Service Commission in December, 1965.

One hundred twenty-one or 60.5 per cent of the applied science teachers studied were relatively new in the teaching service, with teaching experience of from one to five years. The mean teaching experience in applied science was 5.56 years. A total of 74 or 37% were pursuing graduate work, and only two or 1.0 per cent had attended science workshops.

The teachers felt a need for in-service training in soil analysis, plant breeding, livestock and poultry disease immunization, electrical installation, superivising science projects, preparing courses of study and guides suited to local conditions, correlating their science instruction with agriculture, and constructing science apparatus out of local materials.

131. ZARRAGA, JOSE CRUZ. Proposals Toward Improving the Program of Supervised Farming Experiences of Vocational Agriculture Students in the Philippines. Thesis, M.S., 1960, University of Minnesota. 58 p. Library, Department of Agricultural Education, University of Minnesota, St. Paul.

Purposes. The purposes of this study were two-fold: first, to prepare suggestions for the improvement of a supervised farming program for vocational agriculture students in the Philippines; and second, to discover the relationship existing between the farming programs and factors affecting the development of the farming program.

Method. Data for this study were gathered from related readings and studies made in the United States and in the Philippines. For information about the farming program practices as adopted in the agricultural high schools, the writer corresponded with vocational agriculture teachers in the Philippines.

Findings and Interpretations. In many Philippine agricultural high schools, principles of supervised farming were not properly implemented. The "directed" method of farming programs, where the students are assigned to work on school projects, still exists. The male students were not given opportunities to develop the managerial skills and abilities which are primary and fundamental to successful farming. Other defective practices were:

(1) The undertaking by many students of single projects in either crop or animal raising, which is of limited scape.
(2) The teacher's non-utilization of the farming programs as a basis of instruction.
(3) The short duration (from one to two years) of the farming programs.
(4) Lack of emphasis on record keeping.
(5) The non-use of the Future Farmers of the Philippines to vitalize the supervised farming program.

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